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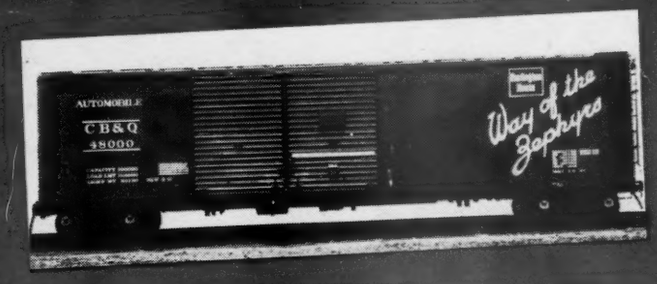
For Railroad Shops



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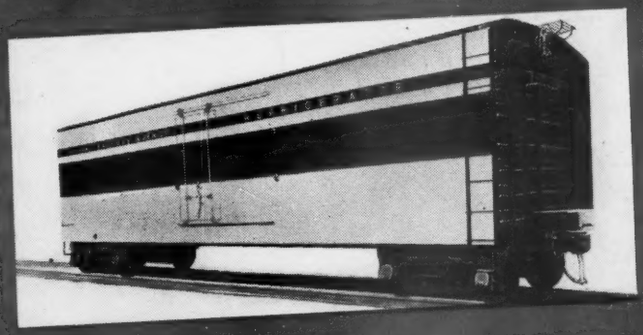

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Hold Traffic on Line
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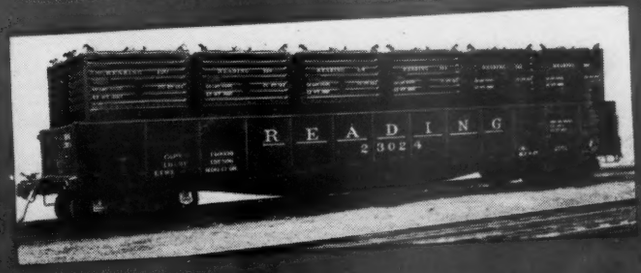

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FUTURE SIGNALING—

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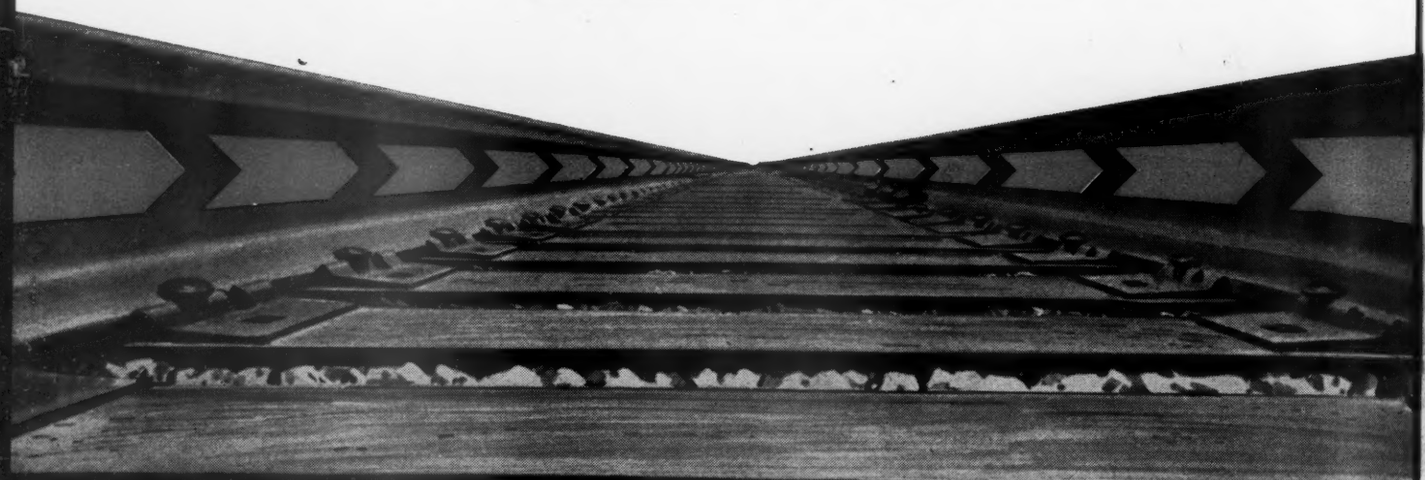
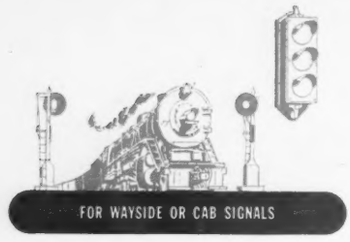
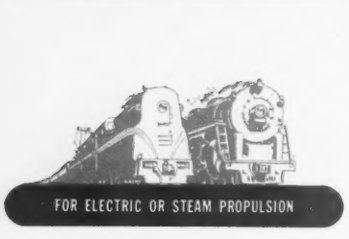




FOR WAYSIDE OR CAB SIGNALS



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The Week at a Glance

DRIFTING DANGEROUSLY: Only in North America are railroads still privately owned and operated. And in this country their health is definitely below par. Their obvious trouble, of course, is inadequate earnings and gloomy prospects for their improvement. But this condition is the result of a number of causes of a political and economic nature, among which our leading editorial lists several of major importance. The existence of these threats to the well-being and endurance of private control of this country's railroads is a challenge to the managements of those properties to employ all of the foresight and energy and resolution of which they are possessed—and that is a formidable amount—in overcoming them. But it cannot be said that the challenge has been met as it must be met. When strictly technical difficulties are discerned, railroad managements attack them vigorously and persistently until they are satisfactorily disposed of. Equal determination and ingenuity and aggressiveness should be productive of equal success in the solution of political and economic problems. They will not be solved so long as no concerted effort is applied. And too much time has been lost already in applying the technique of technological progress to the problems of the political field.

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PROGRESSIVE PER DIEM: Following a member-road vote, the A. A. R. is increasing freight car per diem charges to $1.50 on September 1. As already reported, the I. C. C. has gone the railroads one better, ordering a $2 rate to be effective, except on specified types of cars, for the six months following October 1. In the face of these developments further consideration is scheduled by the commission of the short lines' contention that per diem ought to be 95 cents.

●

PRIMER IN PERCENTAGE: The opportunity which the Interstate Commerce Commission has given the railroads seeking approval of the Ex Parte 166 freight rate increase proposal to submit their case for that increase in formal statements made available in advance of the public hearings and examination of witnesses has resulted in an array of testimony of grave need. From all sections of the country—as is indicated in our article in this issue summarizing very briefly a representative selection of these submissions—railroad after railroad demonstrates that its present earnings, if any, are far below the rate judicially established as a fair return. In short, the railroads—and the commission—are faced with the necessity of adjusting to wage and price levels measured in 1947 dollars the rate levels that were established when money was worth more.

●

TRUCKING VADE MECUM: A remarkably—and uniquely—complete compendium of facts and figures about the motor transport industry, its growth and current status and the unsolved economic and political problems to which it has given rise, is the subject of a review on page 47. This big book is another product of the fruitful research accomplished by the Railroad Committee for the Study of Transportation under Judge Fletcher's leadership.

●

POINTING THE WAY: In the mass of statistics and charts the committee has assembled it has found abundant ground for several observations of fundamental significance to the effectuation of the national transportation policy laid down by Congress (but never fully applied by the appropriate administrative agencies). First of all, the study demonstrates that present procedures of financing highway construction and maintenance—whereby highway users, particularly commercial users, pay far less than the whole cost of the facilities provided for their convenience and profit—produce results exactly opposite to the objectives of the stated national policy. It shows that regulation of the beneficiaries of these expensive facilities is woefully lopsided, with the greatest advantage accruing to the so-called private trucker and the highest barriers put in the way of railroad use of trucks where local conditions make that practice economical. The recommendations resulting from this comprehensive analysis of the highway transport situation indicate ways by which the objectives of the policy stated by Congress might be much more completely achieved—to the advantage of the national economy.

●

PERFORMANCE RATINGS: Continuing his factual appraisal of the comparative performance of reciprocating steam, straight electric and Diesel-electric locomotives under controlled conditions, begun in last week's issue, the New York Central's P. W. Kiefer reaches an interesting set of conclusions about the comparative efficiency, working capacity, availability and overall costs of ownership and use of these three types of motive power. Those conclusions, and the results of the studies on which they are based, are set forth in the article on page 41. Going beyond the outcome of strictly programmed tests of representative locomotives in service, the author ventures also some evaluation of types still in the developmental stage. The net result of this careful and comprehensive investigation is a useful and practical summation of the relative merits of all available modern railroad motive power types.

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IN BRIEF: Programs of the forthcoming roadmasters' and bridge and building conventions in Chicago and the tie producers' meeting in Hot Springs, Ark., appear in the news pages. . . . The arbitration board is winding up hearings on the non-ops' wage increase demands. . . . The commission again has turned the Army down on its claim for reparations because the railroads wouldn't make an allowance for wharfage it performed at Norfolk. . . . The Missouri Pacific will spend over $5 million for rails and fastenings. . . . The Inland Waterways barges can run up the Missouri to Omaha any time the water is deep enough.

A REVIEW OF THE LAW: The scholarly and thoroughly informed late senior general attorney of the Illinois Central, Elmer A. Smith, this spring discussed the legislative and judicial background of the Department of Justice's Lincoln antitrust suit against the western railroads, the A. A. R., and various individuals, with his customary convincing coherence and devastating logic. A substantial part of his able summary of the fundamentals in this proceeding is presented in this issue (page 36), not only because the deficiencies in the anti-trust division lawyers' position are so clearly marked out, but also because it epitomizes the type of professional statesmanship which the railroad industry particularly needs in these crucial times.

●

PULLMAN ASKS MORE: An application for authority to increase Pullman berth and room rates has been filed with the I. C. C. This week's news sums up the terms of the proposal, which would, it is estimated, yield $13 million in additional annual revenues. One result of the increase, if approved, would be to relieve roads whose sleeping car operations have been unprofitable of at least a part of the deficit payments they have had to make to Pullman.

●

FACTS FROM KENDALL: The Car Service Division has been looking into the merits of the widely advertised assertion that the freight car shortage could be materially alleviated by getting freight trains over the road faster. If the average speed of Class I roads' freights was increased 30 per cent—and no such increase is considered practical—the actual saving in car-days, according to Chairman Kendall, would be sufficient only to accommodate some 3,700 additional loads daily, which is hardly a sixth of the current average daily shortage. Our news pages develop Mr. Kendall's studies of this matter further.

●

SPEEDY SERVICE STATION: It's one of the advantages of the Diesel-electric locomotive that it can regularly be put through the normal terminal servicing and fueling routine, and released for another run, in a short time, provided suitable facilities are available to carry out these operations with reasonable expedition. What has been done in this direction in the plant at St. Louis which the G. M. & O. has inherited from the Alton is told in an illustrated article in this issue. Without spreading out all over the landscape, provision is made for the necessary servicing to be completed within 45 min. With this sort of timing it is possible to power 12 passenger trains daily between St. Louis and Chicago with 5 two-unit Diesels.

●

DOG DAYS: Something on the order of an astigmatic aberration seems to have affected the *glance* this page took, a couple of weeks ago, at our article describing the Budd-built cars for the Central of Georgia's new "Man o' War." Anyhow, an inaccurate identification of the builder appeared here. Maybe it was the humidity.

Two Million Miles along "Main Street"

THE first eleven General Motors Diesel freight locomotives on the Northern Pacific — "Main Street of the Northwest" — have rolled up the impressive total of 2,416,571 miles since the first one entered service in February, 1944.

Speeding long freight loads between the Midwest and the Northwest, these locomotives have about as versatile and tough a hauling job as can be found anywhere.

But they take it all in stride. As shown by the performance table, these 5400 H.P. General Motors Diesels have worked an average of 6,461 miles a month in 374 locomotive months of service. Together, they have met their assigned mileage 93.6% of the time.

On "Main Street" or on branch lines, General Motors' understanding of Diesels — advanced designing — most complete and modern manufacturing facilities — results in dependable revenue-earning service with new standards for availability and for low-operating and maintenance costs.

PERFORMANCE RECORD OF ELEVEN GM DIESEL FREIGHT LOCOMOTIVES

Loco. No.	Date Placed In Service	Total Miles Operated	Average Miles Operated Per Month	Percent Availability
6000	2-23-44	243,428	6,085	93.8
6001	3-27-44	228,114	5,849	92.9
6002	5- 9-44	230,586	6,068	95.5
6003	7-12-44	213,264	5,924	94.8
6004	7-18-44	219,424	6,269	95.2
6005	8-22-44	206,280	6,067	96.9
6006	10-25-44	201,555	6,299	95.3
6007	12- 7-44	183,346	5,914	96.8
6008	12-12-44	187,049	6,034	96.7
6009	1-30-45	250,568	8,640	84.1
6010	1-30-45	252,957	8,722	84.6
		Total 2,416,571	6,461 (Av.)	93.6 (Av.)

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS — LA GRANGE, ILL.

RAILWAY AGE

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Technological Progress—Political Deterioration

The long-run successful management of a large business requires wisdom in two totally different fields, viz., (1) mastery of the internal technology of the business and (2) understanding of the environment in which the business is operating, so its working may be constantly adapted to changes in that environment. None of the serious troubles which the railroads have run into in the past 25 years has arisen from inadequate knowledge of variety (1). In that sphere constant research and progress have gone on, month after month and year after year. There would have been more of it if more money had been available, but progress has been continuous anyhow, in spite of this handicap. Figures on ton-mile output per man-hour prove this—to mention only one such index, all of which point the same way, i.e., upwards. Technological progress has, in fact, *had* to work overtime to meet as best it could the industry's continuing loss of ground in coping with its political problems.

Too Little and Too Late

In contrast to the unremitting inquiry and advancement in the physical and engineering side of railroads, the scrutiny and analysis of changes in environment have been piecemeal, intermittent and incomplete. All of the railroads' serious difficulties have arisen in this area—and some, at least, of these troubles might have been avoided except for tardy and unsystematic attention to these changes, and consequent failure to benefit, where possible, from them or to control them to advantage. A listing of the really disturbing problems of the railroads is all that is needed to see how completely they spring from lack of inquisitive foresight and resolute action on changes in economic and political surroundings, and consequent incomplete adaptation of the business to them.

The industry's primary trouble, of course, is that actual and prospective earnings and dividends have for more than 15 years been insufficient to keep railroad stocks selling at an average of 100 or better—which average must be maintained or exceeded in order to induce investors to provide a plentiful supply of new capital needed to keep railroad plant adequate and modern. The effects that the relatively poor earnings of the railways have had, and are still having, on the market prices of their stocks as compared with those of industrial companies are positively appalling. Prior to 1919 the Dow-Jones average of railroad stocks always was higher, and usually much higher, than that of industrial stocks. Ever since then, in prosperity and depression, in war and peace, the railroad average has been lower, and usually much lower, than the industrial average. The highest industrial average in 1939 was $156, the highest rail average, $35.90. The highest industrial average in 1946 was $212.50, the highest rail average, $68.31. The industrial average on August 22, 1947, was $179.74, the rail average, $61.22.

Why the Railroads' Credit Is Poor

But poor earnings are a symptom, not a cause. The causes of insufficient earnings are many, but the following list certainly includes the principal ones:

1. Exactions of organized labor.
2. An inadequate level of rates. Between August, 1939, and April, 1947, wholesale commodity prices increased 48 per cent, while railway average revenue per ton-mile increased only 11.5 per cent.
3. Regulatory burdens to which other industries, especially the railroads' rivals, are not subjected (e.g., the handicaps in the way of abandoning unprofitable services).
4. Regulatory inhibitions against meeting competition (e.g., the long-and-short-haul clause; and the limitations on railroad provision of highway, waterway and air service).
5. Seemingly infinite appropriations of tax funds to provide free or below-cost fixed plant for rival agencies of transportation.
6. Discriminatory taxation.
7. Tardy realization by the railroads of the seriousness of transportation competition, and slowness to adapt their rates and services to new conditions.

All of these unfavorable conditions could have been mitigated or perhaps even averted by timely observation and study, and by prompt and vigorous remedial action which such inquiry would have revealed as advisable. A few instances may be cited:

Railroad labor troubles, especially the onerous work-

ing rules, had much of their origin in shortsighted treatment of employees by management. Systematic foresight would have disclosed the danger and would have removed the cause for some and maybe most of these restrictive rules before they were adopted—and would certainly have fought with greater zeal and thoroughness the disastrous lengths to which administrative interpretation of these rules has gone. Even now there appears to be no organized, industry-wide effort to detect and correct causes for employee complaints before they lead to harmful concerted action. Really serious effort to instruct employees in their selfish interest in the economic health of the industry has only recently commenced.

Railroad rates are limited by the regulators, who are supposedly judicial officers but who, experience has shown, are sensitive to the general climate of public opinion. Since there has been insufficient systematic study of public opinion and education of the public in its selfish interest in a prosperous railroad industry, the regulators have usually been afraid to allow the roads the level of earnings necessary to their economic health.

No continuing plan is in effect to develop fully the facts and to inform the public of the comparative economics of the several forms of transportation—and how the railroads, which provide the indispensable all-commodity, all-destination service must have for their health the right to meet "pick-and-choose" competition on its own terms.

Neglected Opportunities

The railroads have never appeared before the committees of Congress to oppose "federal aid" appropriations for highways or to demand from them suitable safeguards to collect a compensatory *quid pro quo* from commercial users of the highways. The railroads have, it is true, opposed waterways appropriations, but they do not appear to have carried on a particularly vigorous fight against them where it would be most effective, i.e., among business men in the localities where the demand for waterways originates.

Even in such a state as New Jersey where railroads suffer under taxation higher than in any other state and where there has been much public discussion of railroad taxation, the intelligent public still appears to have no understanding that the largest transportation facility in the state is not the railroads but the highway system, and that this largest transportation facility not only yields no tax revenue, but consumes taxes. Furthermore, this transportation facility is largely used by out-of-state truck operators who do not pay a cent toward the cost of this enormously costly transportation plant.

A veteran passenger traffic manager observed several years ago that, if the railroads had adopted the 2-cent fare ten years earlier than they did, the intercity bus would never have got a start. After 20 years of sad experience with l.c.l. competition from trucks, there are some railroads even today which can see nothing to be done about this traffic except to raise the rates on it. Others have a deeper understanding—but it takes joint action to cope with such a problem.

A valiant effort was made by the A.A.R.'s Railroad Committee for the Study of Transportation to collect, classify and analyze for the guidance of railroad policy the important facts about all the "environmental" problems enumerated above—but the appropriation for the work of this committee was allowed to expire at the end of June this year. Some of the reports of its investigations are highly informative (e.g., the study on highway transportation, to mention only the one of the series which has most recently appeared). But, already, the information presented in these studies is becoming "dated."

Highway and other subsidized transportation, regulation determining the level of rates, personnel practices, railway finance, the traffic outlook—developments in these fields do not stand still. The events which are taking place this year in these areas are just as important for the guidance of intelligent management policy as those which occurred in the war years covered by the A.A.R. committee's investigations and reports. Scientific studies in the technology of railroading are not made once and for all, and then written up and filed away in the archives. Instead, technological studies are continuous—and, what is more, effective steps are taken to see that the lessons which they reveal are put to practical use.

When the railroads adopt, in their investigation of and adaptation to the changes going on in their economic and political environment, the same procedure that they (and the manufacturers of railway products) pursue with such success in assuring technological progress, then these environmental problems which are responsible for most if not all the industry's difficulties will begin to be surmounted. But the time is growing short. The railroads on this continent are the only ones still left in the hands of private enterprise.

Only Good Facilities Can Do a Job Like This

Along about 1940, when labor and material costs were considerably lower than they are today, an eastern railroad had occasion to build some new cars in its own shops. That road was unusually well qualified to do this kind of a job—both by experience and by the character of its facilities for car building and repair. The cars in question were box cars of more or less standard design, and were modern in every respect. The program called for the construction of 2,000 units at a rate of 12 each working day. A large part of the fabrication of sub-assemblies was done for the road in the plant of a steel fabricator on its line, and the railroad set up an assembly line and organized the forces that made it possible to turn out the cars at the rate of 12 a day.

Since those days the cost of materials has gone up from 40 to 60 per cent and the overall cost of labor, to the railroad, has gone up somewhere between 75 and 100 per cent. Nevertheless, recently, that same railroad put an order of the same design of cars through its shops at a production rate of 16 cars a day for an

average labor cost per car only about 18 per cent higher than in 1940.

An inspection of this road's shop or any one of several modern railway car building and repair plants will disclose that in such exceptional instances the managements have been sufficiently farsighted to know that with rising material and labor costs their only adequate defense is a more capable supervisory organization and the last word in shop facilities which will eliminate man-hours. These managements realize that today's job is one that can no longer be successfully dealt with by guesswork. It is an engineering job—and the penalty for ignoring that fact is mounting cost figures which lead ultimately to financial difficulties.

A Case Where the Side Lines Are Safest

Well, now that the sorry story of the disgraceful behavior of many people in public "rest rooms," so-called, has been given an airing in the August "Reader's Digest," it might as well be added, to complete the record, that the railroads, too, know something about this situation.

The "Digest" article limited its discussion, largely, to the conveniences provided, gratis, at automobile service stations, but the railroads have been in the business of catering to the public comfort for a much longer time than the filling stations have—and mistreatment of these facilities is such an old story with them that they have come to regard it, along with death and taxes, as something they will never be free of. Until now there hasn't been much comment in public about the situation, but a gentleman is reluctant to bring up such a subject, particularly when, as the "Digest" article reveals, the "ladies," alas, appear to be the worst offenders.

The problem has two aspects which are quite distinct. One of them consists in malicious defacement or actual destruction of the premises, or parts of them, and regarding this aspect the men must shoulder at least an equal share of the guilt. The principal remedy seems to lie in making the facilities as nearly indestructible as possible, using materials that are not only hard and durable but that also have smooth surfaces which can be easily cleaned. It has even been suggested that the railroads might find it profitable to develop a special line of toilet fixtures designed to resist the harsh treatment accorded them in passenger stations.

Now, controlling our trepidation as best we can, we come to the other aspect of the problem which has its principal source—to put it as mildly and as politely as possible—in a singular lack of habits of cleanliness on the part of those using the women's retiring rooms. The average American woman is known as a fastidious housekeeper, implacable in her attack on every kind of dirt in the home. But put her in a public rest room and—well, for details ask any station attendant with first-hand knowledge of the atrocities he witnesses every day.

Something ought to be done about the situation, but what? To the uninitiated it might appear that at least a partial remedy lies in providing modern facilities that are spick and span to begin with, trusting the patrons to keep them that way. If anything, however, such a stimulus seems to operate in reverse. Recently a brand new passenger station of moderate size was opened for business to the accompaniment of ceremonies during which an officer of the railroad spoke proudly of the modern appointments in the rest rooms and asserted that the intention was to keep them clean. The attack was being prepared, however, even as he spoke—an inspection of the women's rest room, made only a few hours after the station was so auspiciously and hopefully opened, disclosed that it was already in a sorry condition.

A paradoxical aspect of the problem is that the ones at fault are also the principal sufferers. But the quirks of feminine psychology are such that, somehow, the blame comes to rest on the railroads rather than the true culprits. Probably the only certain remedy would be a program of education to promote better rest-room habits. But how is this education to be accomplished and who is to do the educating? Having stated the problem and mentioned the only solution that comes to mind, we hasten to the side lines where further events may be observed in comparative safety.

In the Public Interest

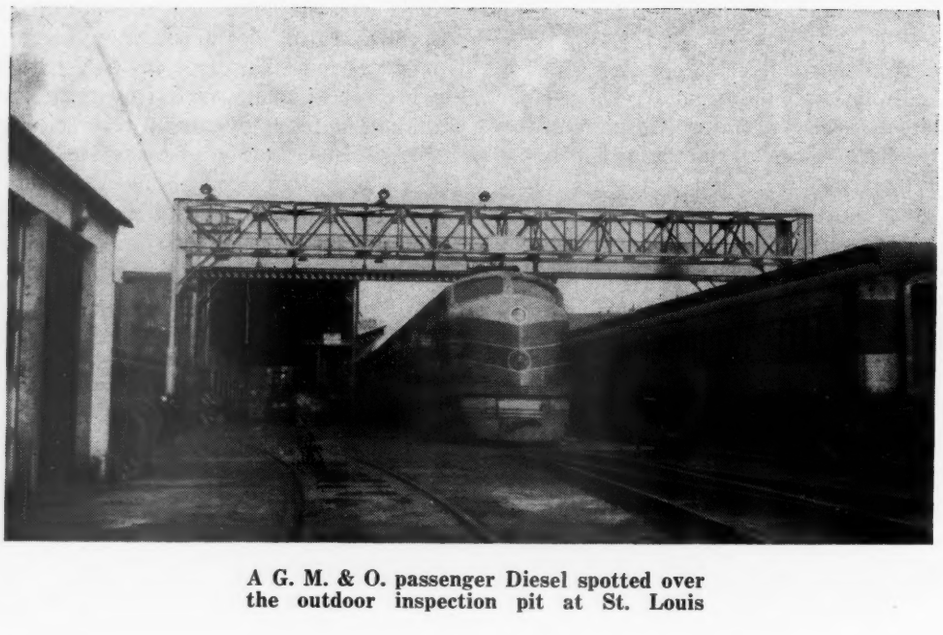
Bare mention of the term "featherbedding" always brings screams of denial from the railroad unions that there is any such thing. It would be interesting, therefore, to find out how the railroad union leaders distinguish from featherbedding the changes in operating rules which the five railroad unions are asking from the roads in their current wage negotiations. . . .

What the railroad unions are trying to do with their working rules is so to penalize the use of all of the heavy equipment that has been developed in the last 20 or 25 years that the railroads of the country will be forced back to the low operating efficiency of World War I days. From an economic standpoint, of course, this is the deepest folly. The whole purpose of improved equipment in the railroad industry or any other industry is to enable a smaller number of employees to earn higher wages for doing, with mechanical aids, the work that a larger number were formerly paid low wages to do.

The operating unions' demands furnish an excellent illustration of why the public interest has come to play so great a part in labor disputes and legislation affecting them. This is a comparatively recent development. During most of the history of American unions it was held that wage demands were of concern only to the employer and his employees. When, however, those demands become so excessive that they can only be met by greatly increasing the cost of services or goods to the public, an interest is touched that is greater than that of either the employer or the employee. . . .

The additional billion dollars sought by the railroad unions would not move an extra pound of freight anywhere in the country. It would be a tax on all freight users for the benefit of a relatively small group of railroad workers, many of whom would be paid for not working. In situations such as this, the public interest is paramount. Even if the railroads were able to pay the increases involved, they should be forbidden to do so, because of the disastrous effect that the resulting increased costs would have on the economy of the whole nation and the livelihood of all its wage earners.

—*The Chicago Tribune*



A G. M. & O. passenger Diesel spotted over the outdoor inspection pit at St. Louis

G.M. & O. Speeds Up Diesel Servicing

New facility at St. Louis, featuring three working levels and underground concrete oil-storage tanks, handles two-unit passenger Diesels in 45 min.

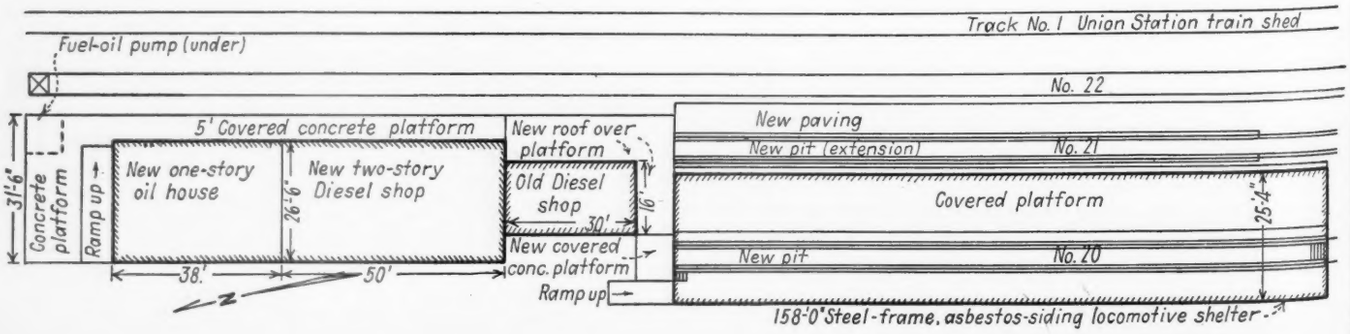
PROGRESSIVE maintenance and servicing of Diesel-electric passenger locomotives operating into St. Louis, Mo., on the Gulf, Mobile & Ohio are now being carried out efficiently and rapidly at new Diesel repair and servicing facilities at that point. The new facilities, which are capable of completely servicing and refueling a two-unit, 4,000-hp. locomotive and releasing it, ready for the return trip, at the end of a 45-min. period, replace the road's earlier Diesel facilities which were enlarged and modernized in the new work. Actually, the new facilities were constructed for the Alton and were completed before that road and the G.M. & O. were merged to form a single system.

The new layout includes a shop building; a locomotive house, serving two repair tracks and containing three working levels; three inspection pits, each of sufficient length to accommodate two Diesel units; a body hoist and transfer table for changing complete trucks; a drop table for changing out pairs of wheels; and miscellaneous facilities.

Although relatively small, the new layout is completely equipped to perform all but the heaviest repairs on the Diesel equipment, and its efficient operation has resulted in excellent performance records for the Diesel locomotives assigned to runs entering St. Louis.

In many respects, the new facilities are not unlike some of the more recently built Diesel servicing and repair facilities on other roads, but one uncommon feature is the design of the fuel-oil storage tanks, which are of concrete and located underground. The tanks, two in number, each have a capacity of 50,000 gal., and their location underground gets them out of the way in a congested area and permits effectively using the space above the ground level.

The locomotives for 17 daily passenger



Plan showing the arrangement of the

trains are handled at the St. Louis facility. Of these, 14 are G.M.&O. trains, and three are operated by the Baltimore & Ohio. The short time now required for end-of-run servicing has, for example, enabled the Alton route to provide Diesel service on 12 trains operating between Chicago and St. Louis, a distance of 284 miles, using only 5 locomotives. Assignment of these Diesels is such that each makes approximately 1½ round trips daily between Chicago and St. Louis, and each is afforded a layover of approximately eight hours at St. Louis every fourth day.

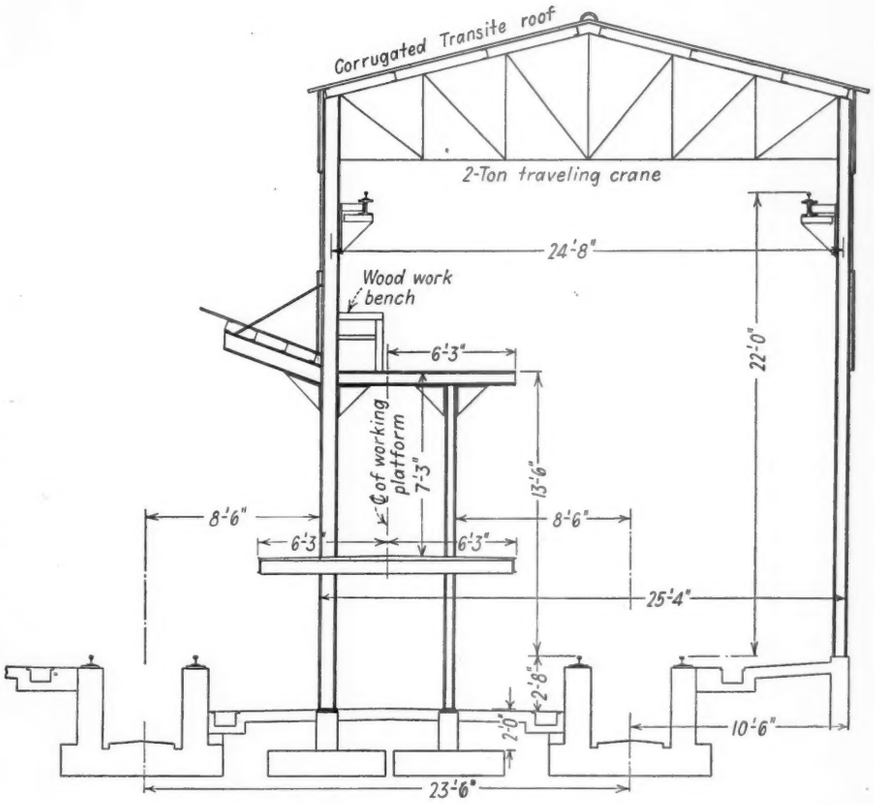
The new Diesel facilities are located immediately west of the track layout at the St. Louis Union Station and at the north end of the Twenty-first Street coach yard. They replace in the same location the Alton's earlier Diesel facilities which proved to be inadequate for handling the locomotives in the time allotted for servicing. The layout includes three tracks of the Twenty-first Street yard, numbered, from west to east, 20, 21 and 22, Track 22 being located immediately adjacent to the Union Station train shed.

In the old arrangement, Tracks 20 and 21, in the open, were used for servicing the Diesels, while Track 22 was used for handling cars loaded with fuel oil, parts and other material. Track 20 was stubbed directly at the south end of a small shop building, a one-story structure 16 ft. by 30 ft. in plan, and Track 21 was stubbed at a point 40 ft. to the south, but the third track extended beyond the shop 105 ft. to the north end of the facilities. A concrete truckway between Tracks 20 and 21 extended south from the shop for a distance of 140 ft., and beyond this point each of the two repair tracks was equipped with an inspection pit 141 ft. long. Drop tables were provided for each of these tracks, located near the mid-points of the inspection pits.

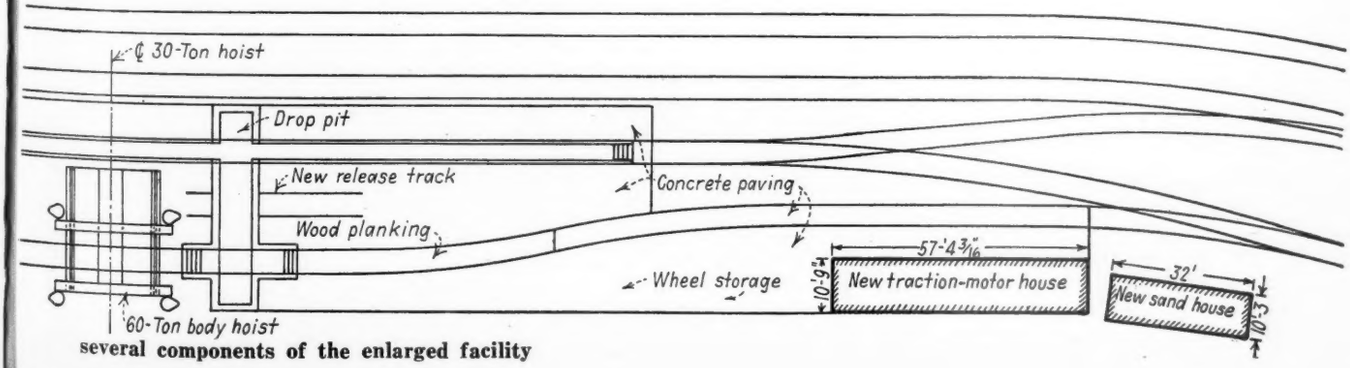
A concrete platform extended along the east side of the shop building and for 56 ft. south of it, adjacent to Track 22. North of the shop, this platform opened onto a 25-ft. by 26-ft. wooden platform, which was used for the storage of drums of oil, grease and other materials. At the north end of the facility were five 10,000-gal. steel fuel-oil storage tanks.

As before, Tracks 20 and 21 are the repair tracks, but in the revised layout repair activities are concentrated in the new Diesel house, 25 ft. wide and 158 ft. long in line with the tracks, located immediately south of the shop building. This house is of steel-frame construction, with corrugated-asbestos Transite roof and sides which extend down to a height of 13 ft. 6 in. above the track level. It extends over Track 20 and along the west side of Track 21, and houses, in part, a new deck-height working platform, 12 ft. 6 in. wide, located between these tracks. To provide room for this platform, Track 20 was shifted westward a distance of 10 ft. 8 in., and the platform between tracks was projected for three feet beyond the east side of the house to serve Track 21. This projection is protected from the elements by an overhead canopy.

On the interior of the house, a high-level platform, 8 ft. 9 in. above the deck-level platform, and serving Track 20 only, facilitates access to the roof hatches of locomotives on this track. The hatches may be lifted off and moved to a point where they will not interfere with the work, by means of a two-ton



As shown in this cross section of the locomotive house, it contains a three-level working platform to facilitate repair activities



several components of the enlarged facility

Interior of the locomotive house looking south along Track 20

traveling crane operating the full length of the house. This crane is also used, as necessary, in handling the heavier parts in making running repairs to Diesel locomotives spotted on Track 20.

The open construction of the Diesel building, together with continuous windows, five feet deep, extending along both sides of the structure at the eave lines, affords ample daylighting for its interior. Night lighting is provided by an adequate arrangement of incandescent drop lights.

Both platform decks are of concrete-filled steel grating. These are supported on the east side by the steel frame of the shed and on the west side by an additional row of steel columns. The space beneath the main platform level is unobstructed to provide a third, lower, working level, in which the employees may stand upright when working on the running gear. The floor of this level is 7 ft. 3 in. below the locomotive deck level, 2 ft. 8 in. below the top of rail, and is afforded generous lighting.

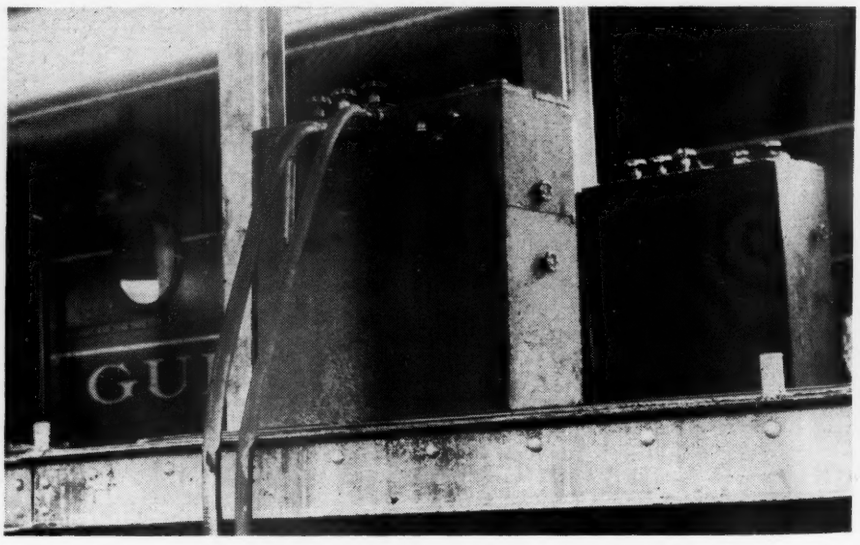
Long Inspection Pits

Both repair tracks have new inspection pits within the limits of the locomotive shed. The pit in Track 20 is 150 ft. in length, while that in Track 21 is, in reality, a 132-ft. northward extension of the original pit in this track. As mentioned previously, this original pit was 141 ft. in length. In the new work it was also extended 17 ft. at its south end, bringing its total length to 290 ft., sufficient to accommodate two of the two-unit Diesels. Recessed lighting fixtures, located at frequent intervals in the pit walls, are so arranged as to direct light onto the running gear and underframes. Each pit is provided with a ¾-in. pipe line for shop air and a 1½-in. line for reclaimed crankcase oil. The old pit for Track 20, in its former location, was covered over with a concrete slab when this track was shifted.

To speed up the work of refueling and servicing the Diesel locomotives, pipe lines supplying fuel oil, lubricating oil, compressed air and water are brought together at the north end of the locomotive shed and are then carried in a common conduit located beneath the center of the deck-level platform. Two pairs of outlet manifolds are provided on this platform, one pair being located 45 ft. from the north end of the shed, while the second pair is located 57 ft. farther south. Each of these manifolds contains outlets for a ¾-in. air line, a 1-in. water line and three 2-in. lines for lubricating oil, while one of the manifolds at each location contains, in addition, an outlet for a 1-in. fuel-oil line.

Supplementing these service lines and outlets, two 2½-in. fuel-oil outlets, fitted with Barco joints, are located below the platform, near each of the manifold locations, to serve each track. Fuel-oil, water and steam outlets are also provided for the older section of the pit in Track 21, outside the shed area.

Located immediately south of the locomotive house, serving Track 20, is the new body hoist which, as pointed out earlier, is used in changing trucks when they are due for heavy repairs. The hoist, of 60 tons capacity, is of the four-jack, electrically-operated, beam type, having a rise of 3 ft. 6 in. A shallow pit, 16 ft. wide, located immediately below the hoist, contains a transfer table, which operates laterally to a release track midway between Tracks 20 and 21. Further handling of the trucks



One of the manifolds for supplying fuel oil, lubricating oil and water to Diesel locomotives at the locomotive house

into cars is by means of a 30-ton overhead crane which extends across all three tracks.

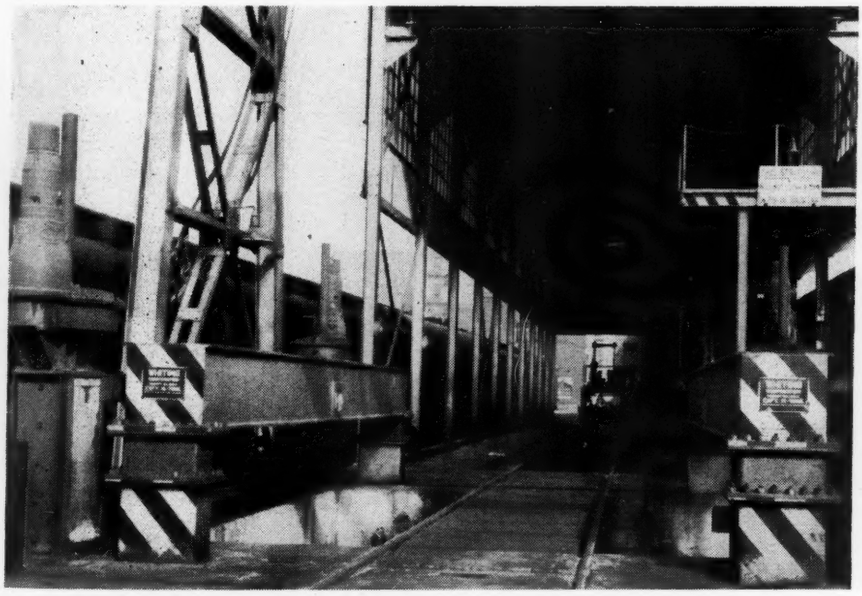
New drop tables serve both Tracks 20 and 21 in the area immediately south of the body hoist, to aid in changing pairs of wheels, with their traction motors, when work of this nature is necessary. These tables are of the nesting type and operate in a connecting pit which also serves an intermediate release track. The Whiting Corporation of Harvey, Ill., furnished the body hoist, the 30-ton overhead crane for handling trucks, the 2-ton overhead crane in the locomotive shed, and the drop tables.

Fuel-Oil Storage Tanks

To gain room for the enlarged facilities the five former steel storage tanks for fuel oil were removed and were replaced by two larger tanks of concrete located underground at the extreme North end of the new layout. These tanks are each 26 ft. by 27 ft., with an inside height of 10 ft. 7 in., measured from the bottom to the underside of the cover slab. The interior surfaces of the tanks were given a finished surface when the forms were removed and were then painted with three coats of hot linseed oil. Later they were given an additional coating of Ironite.

A concrete platform, 50 ft. by 31 ft. 6 in. in plan and 48 in. high, was constructed immediately above the underground tanks. This platform, which is used primarily for the storage of oil and other materials, as was the former material platform, is served by Track 22, which continues to be used as a material track. The platform also supports a 30-ft. by 26-ft. brick oil-storage shed used by the car department. Electrically-operated pumps for removing fuel oil from the storage tanks are located in the space between the tanks and the platform.

The traction-motor storage shed, located at the extreme south end of the facility



This 60-ton Whiting body hoist, at the south end of the locomotive house, is used to change complete trucks of Diesels

The small shop building was enlarged by constructing a two-story brick addition, 88 ft. by 26 ft. 6 in., at its north end. This addition abuts the south wall of the new oil-storage shed. A doorway opening was made in the north wall of the old shop to permit free access to the addition, and the entire lower floor of the enlarged structure is given over to the storage of parts and tools and for repair activities. The second floor contains an office for the shop foreman and also lockers, toilets and washroom facilities. A covered concrete platform extends along the entire east side of the enlarged building and is served by Track 22.

Other auxiliary facilities in the new layout include a new traction-motor storage shed and a new sand house, both one-story structures of steel frame construction with corrugated Transite sides and roof. These are located near the south end of the layout, west of Track 20. Ten wheel-storage tracks, each 12 ft. long, are also located in this area. Traction motors and pairs of wheels are handled to and from these storage points by means of a Yale lift truck of 5 tons capacity.

Servicing activities at the Diesel shop are carried out with a force of 62 men working under the direction of a general foreman. This force is divided into three shifts, each with a minimum of one foreman, an electrician, four machinists, a pipefitter, six helpers and six laborers. As mentioned previously, all running repairs, except the changing of the Diesel engines, are performed at this point. This heavier work, when necessary, is done at the road's freight Diesel repair and servicing facility at Venice, Ill., six miles from the St. Louis shop.

The new shop and facilities at St. Louis were constructed for the Alton by the Terminal Railroad Association of St. Louis. Col. H. Austill, chief engineer of the T.R.R.A., and M. D. Carothers, then chief engineer of the Alton, and now assistant chief engineer of the G.M.&O., Bloomington, Ill., were in general charge of the planning and execution of the work. Immediate supervision of the construction was by A. E. Bierman, special engineer of the T.R.R.A., and W. A. Ross, assistant engineer.

The Issue in the Anti-Trust Cases

Are railroads to remain under regulation enjoined to temper its discipline with care for the subject's health, or are they going to be subjected to a purely punitive regime?

By ELMER A. SMITH
Late Senior General Attorney, Illinois Central

[The last professional appearance of Elmer A. Smith, just prior to undergoing medical attention for his fatal illness, was on April 23 before the federal court in Lincoln, where he made the opening statement for the railroad defendants in the Justice Department's anti-trust case against the Association of American Railroads et al. This article is a condensation of that statement, and is presented here (1) because it ably summarizes the issue involved in this important case, and (2) because it will be well for the railroad industry to remind itself of the type of professional spokesmanship which it has lost in Mr. Smith's untimely death, and the resultant burden which his passing places on his associates in this important endeavor.—EDITOR.]

THIS case involves great and momentous questions of law and public policy. It poses the problem of accommodating two statutes, the Sherman Act and the Interstate Commerce Act.

No one can approach the issues in this case without a deep sense of their importance, their complexity, and their novelty. For, taking the Georgia anti-trust case and this case collectively, this is the first time in half a century that an effort has been made by the Department of Justice to superimpose upon the detailed and comprehensive and complete regulation of the railroads, found in the Interstate Commerce Act, a theory of regulation which the department in the last four or five years has evolved.

Division of Authority

Under this theory of regulation advanced by the Department of Justice, rates must be competitive although this standard of a competitive rate is nowhere to be found in the Interstate Commerce Act. The application of this standard to the rates maintained by the carriers of this country now subject to comprehensive regulation by the Interstate Commerce Commission, the tribunal established by Congress to administer the Interstate Commerce Act, would be wholly within the control of the department through its power to enforce the Sherman Act.

Thus the regulation of the carrier rates in this country would be divided between two bodies, one the Interstate Commerce Commission, regulating the rates pursuant to the standards of rate making found in the Interstate Commerce Act, and in such a way as to carry out the aims set out in the Congressional Declaration of National Transportation Policy, and the other the Department of Justice, regulating rates with the power it possesses to enforce the Sherman Act.

The defendants for whom I speak assert with confidence that every act with which they are here charged was taken by them for the purpose of aiding in the effective administration of the Interstate Commerce act and was indeed required by that act, of contributing to the high purposes of that act, of insuring within human limitations that changes in rates would conform to the standards laid down in that act, and at the same time yield revenues sufficient to enable the carriers to provide in the public interest adequate and efficient railway transportation service, and also for the purpose of eliminating what Congress itself and what the commission and the Federal Coordinator had so many times called upon the railroads to eliminate, and that is competitive waste.

As Justice Brandeis said (270 U. S. 266, p. 277):

> . . . competition between carriers may result in harm to the public as well as in benefit; and . . . when a railroad inflicts injury upon its rival, it may be the public which ultimately bears the loss.

Even if the Interstate Commerce Act be laid to one side, the defendants further assert with confidence that every act with which they are charged did not constitute any undue or unreasonable restraint of trade under the Sherman Act and that what they have done was in fact in aid and promotion of trade and commerce and was in the public interest.

This court held in its opinion of September 27, 1945, in this case, that the Sherman Act applies to interstate common carriers by rail. And we want to make it clear that we do not contend that the Interstate Commerce Act gives the railroads some blanket and complete immunity from the Sherman Act. The position of the railroad defendants for whom I speak is that in applying the Sherman Act to railroads and railroad rate-making and railroad collaboration, the court will look to the provisions of the Interstate Commerce Act and to the interpretation and application of that statute by the commission, an administrative tribunal established by Congress exercising legislative power delegated to it by Congress (*Houston Railroad Company v. United States,* 234 U. S. 342, 355; *Arizona Grocery Co. v. A. T. & S. F. Ry.,* 284 U. S. 370, 386), to determine the intent of Congress and the public policy of the nation in respect to the "legitimate area in which collaboration may operate," to use the language of the court in the Georgia case, 324 U. S. 457. This area the court said in the Georgia case it did not stop to delineate in its preliminary consideration of the case. Defendants assert, as we have said, that as a primary and fundamental position, whatever collaboration they have practiced is in fact in aid and promotion of trade and commerce and of the public interest, does not unduly restrict competition, and is required in aid of the effective administration of the Interstate Commerce Act and the attainment of the policies of Congress, as set out in the Declaration of National Transportation Policy.

Railroads Are Regulated

This case presents this fundamental difference from the anti-trust cases which the Supreme Court has had occasion to consider in the past five decades —the fact that the defendants here are a regulated industry and that every one of their activities which in any way touches the public interest is subject to this complete and comprehensive control and regulation by the Interstate Commerce Commission.

All this leads first to this consideration: This court does not have before it, therefore, questions involving solely a construction of the Sherman Act and its application to the regulated carriers of this nation. The court has before it questions which involve the construc-

tion of both the Sherman Act and the Interstate Commerce Act. Thus one of the underlying and fundamental questions before this court is how and to what extent and in what manner the Sherman Act, in the light of the regulatory statutes applicable to railroads, should be and can be applied to railroads, and in such a way as not to weaken or destroy the Interstate Commerce Act or the power and capacity of the Interstate Commerce Commission effectively to administer that act, and thus carry out the policy of Congress as expressed in the National Transportation Policy.

This accommodation of different statutes is of course no new task for the courts.

What the Courts Have Said

In an opinion in *Bradley v. Local Union No. 3,* 325 U. S. 797, Mr. Justice Black, speaking of the Sherman Act on the one hand and the Norris-LaGuardia Act on the other, said:

> The result of all this is that we have two declared congressional policies which it is our responsibility to try to reconcile. The one seeks to preserve a competitive business economy; the other to preserve the rights of labor to organize to better its conditions through the agency of collective bargaining. We must determine here how far Congress intended activities under one of these policies to neutralize the results envisioned by the other.

But a case that touches the problems here even more directly and immediately is *McLean Trucking Co. v. United States,* 321 U. S. 67, decided as late as January 17, 1944, in which the court had before it the validity of an order of the Interstate Commerce Commission authorizing the consolidation of seven large motor carriers. The Interstate Commerce Act makes lawful the consolidation of carriers if the commission authorizes such a consolidation.

The United States had confessed error on the part of the commission, taking the position that the commission had not given the weight it should have given to the Sherman Anti-Trust Act. The court said among other things (p. 79):

> . . . it poses a problem of accommodation of the Transportation Act and the anti-trust legislation, to which we now turn. In doing so we note that the former is the later in time and constitutes not only a more recent but a more specific expression of policy.

And later on the court said (p. 83):

> The history of the development of the special national transportation policy suggests, quite apart from the explicit provision of section 5 (11), that the policies of the anti-trust laws determine "the public interest" in railroad regulation only in a qualified way. And the altered emphasis in railroad legislation on achieving an adequate, efficient, and economical system of transportation through close supervision of business operations and practices rather than through heavy reliance on the enforcement of free competition in various phases of the business, cf. *New York Central Securities Corp. v. United States,* 287 U. S. 12, had its counterpart in motor carrier policy.

This decision gives emphasis to the fact that the court does not have before it in this case industries such as oil companies, tobacco companies, pottery companies, clothing companies, lumber manufacturing companies, and so on down the line, whose prices and profits are subject to no control except that of the market place. The court has before it here an industry whose rates and fares and whose profits are subject not only to regulation by the Interstate Commerce Commission but are in fact controlled and regulated by the commission. The commission itself has said that the rate structure in this country is very largely what has come out of its decisions. It now has some 312 volumes containing decisions dealing with rates, fares and practices of the railroads and motor and water carriers.

References have been made to the decisions of the Supreme Court in 1897 and 1898 in the *Trans-Missouri Freight Association Case,* 166 U. S. 290, and the *Joint Traffic Association Case,* 171 U. S. 505. The court held in these cases, to use the language of the attorney general in his letter of December 30, 1899, to the Interstate Commerce Commission, that an association formed by railroads under which the railroads selected a central authority to fix and maintain rates, and under the articles of which association the power of independent action was destroyed and no company could change a rate fixed by the managers of the association without subjecting itself to a penalty, was in violation of the Sherman Act. Following these decisions the articles of association of the various rate conferences were completely revised, the provisions empowering a central authority to fix and maintain rates were eliminated, the power which the central authority had possessed to impose penalties was withdrawn and the right of independent action on the part of each railroad was expressly recognized and reserved.

These two cases, however, were decided at a time when the commission had been stripped of any real power to regulate rates by decisions of the Supreme Court, the most important of which was the *Maximum Rate Case,* 167 U. S. 479, in which the Supreme Court held that Congress had not given the commission the power to prescribe and fix a rate.

It was not long, however, before Congress took steps to remedy this situation. The Elkins Act of 1903 provided heavy penalties for failure to adhere to the published tariff rates. Railroad tariffs which contain the published rates, as the Supreme Court has so many times held, have the effect of a statute and are binding upon the carrier and the shipper. (*Pennsylvania Railroad Co. v. Coal Mining Co.,* 230 U. S. 184; *Armour Packing Co. v. United States,* 209 U. S. 56). Changes in rates must be shown in the duly filed and published tariffs and must be observed as long as they remain in effect. Changes in rates in these published tariffs can be made only on thirty days' notice to the commission and to the public unless the commission, for good cause shown, approves a shorter period of time. No similar requirements with respect to prices can be found in the case of any other industry except the transportation industry.

In 1906 Congress, undoing what the Supreme Court had done in the Maximum Rate Case, specifically empowered the commission in the so-called Hepburn Amendment to the Interstate Commerce Act to fix reasonable maximum rates. Under the Hepburn Act the orders of the commission take effect unless set aside by the courts. The commission was given very large powers over other aspects of the railroad business. The commission was authorized to establish through routes and joint rates. The commission was empowered to prescribe uniform accounts and require annual and other reports.

Protection by Law

The most important change made by the Mann-Elkins Amendment of 1910 was that which empowered the commission to suspend for a limited period new rate schedules for investigation as to their propriety. Thus the commission is in a position to protect the public interest in the matter of changes in rates and to inquire into the lawfulness of those changes before they are permitted to take effect. No general increases in rates have taken effect since 1910 until a hearing has been held by the commission respecting the reasonableness of the proposed increases and until the commission has determined what increases, if any, should be approved. The consumers and purchasers of commodities generally have no such protection with respect to increases in the prices of commodities. The prohibition of the long and short haul clause was made absolute by the 1910 amendment, subject, however, to such relief as the commission might grant in special cases. Shippers were accorded for the first time the right to route their traffic.

The Mann-Elkins Act was followed by the Panama Canal Act of 1912 which increased the commission's powers over rates to and from ports, by the Valuation Act of 1913, under which the commission later made a valuation of all the railroads in the country, and by the Esch Car Service Act of 1917, which gave the commission jurisdiction over the car service of the railroads and which empowered the commission in times of emergency to disregard ownership by the individual railroads of their equipment.

The Transportation Act of 1920 produced, as the Supreme Court said, a new policy in interstate commerce legislation. To quote the language of Chief Justice Taft in the *Dayton-Goose Creek Case*, 263 U. S. 456:

> The new act seeks affirmatively to build up a system of railways prepared to handle promptly all the interstate traffic of the country. It aims to give the owners of the railways an opportunity to earn enough to maintain their properties and equipment in such a state of efficiency that they can carry well this burden. To achieve this great purpose, it puts the railroad systems of the country more completely than ever under the fostering guardianship and control of the commission. . . .

The commission was given the power to fix minimum rates; to fix intrastate rates in cases of discrimination against interstate commerce, and to fix the division of rates among carriers. Authority over new construction, abandonment, acquisition and control was likewise conferred upon the commission, together with broad regulatory powers over the issue of securities by railroad companies.

New Rule of Rate-Making

The Hoch-Smith Resolution of 1925 stated that the conditions which at any time prevail in the several industries should be considered so far as legally possible to do so, to the end that commodities might move freely. It directed the commission to effect such changes in rates on agricultural products affected by the depression in that industry with the least possible delay as would promote the freedom of movement, at the lowest possible lawful rates compatible with the maintenance of an adequate transportation service. It was following the passage of this resolution that the commission dealt with and fixed the class rates in Western territory, and livestock rates, grain rates, and the rates on many other commodities both in the Western and other territories.

The Emergency Transportation Act of 1933 repealed the recapture clause which had been passed in 1920 and set up a new rule of rate-making. Under this new rule of rate-making the commission was directed in the exercise of its power to prescribe just and reasonable rates, to give consideration, among other factors, to the need in the public interest of adequate and efficient railway transportation service at the lowest cost consistent with the furnishing of such service, and to the need of revenues sufficient to enable the carriers under honest, efficient and economical management to provide such service. Both the Supreme Court and the commission held that the new rule of rate-making by its express terms emphasized the carriers' need of adequate revenues. (*Florida v. United States*, 291 U. S. 1, 6; *Gasoline from San Francisco Bay Points to Ogden*, 198 I. C. C. 683.)

The regulatory powers of the commission were extended to the motor carriers in 1935; to the water carriers in 1940, and to the freight forwarders in 1942. All these carriers are subject to regulation of the kind, extent and scope which, though patterned after the regulation of the railroads, reflects the differences between the railroad industry and the motor, water and forwarder industries.

Congress prefaced the Interstate Commerce Act by a Declaration of National Transportation Policy passed in 1940 which is of the greatest significance and importance. Congress has made no such declaration with respect to those industries whose prices are subject to no control except that of competition. Congress gave further recognition in this declaration to the fundamental and essential differences between an industry such as the railroads, public servants performing a public function, and non-regulated industries. Congress states in this declaration that it is its policy to encourage the establishment and maintenance of reasonable charges without unjust discriminations, undue preferences or advantages, and without, and I emphasize this language, unfair or destructive competitive practices. This policy is directed

> . . . all to the end of developing, coordinating and preserving a national transportation system by water, highway and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the postal service, and of the national defense.

I recently examined the briefs for the government, in these old anti-trust cases against the railroads, the Trans-Missouri and Joint Traffic Association cases. The concluding paragraph in a brief filed by the solicitor general in the latter case, which is described as "Comments in Reply to the Arguments of Counsel for the Railroads," reads as follows:

> As the law now stands, the commission has no power to prescribe or enforce rates. Competition secures reasonableness. The law enforces uniformity. In *Inter. Com. Com. v. Railway Company*, 167 U. S. 479, the court held that if Congress had intended to give the commission power over rates, it would have done so in unmistakable language. So too when Congress sees fit to take the railroads out of the operation of the natural laws of trade, it will do so, and for independent competition will substitute government regulation.

We think it would be very difficult for anyone to examine even in a cursory way the legislative history of the Interstate Commerce Act and avoid the conclusion that Congress has since done this very thing.

It seems clear that these great and sweeping and fundamental changes in the Interstate Commerce Act since 1897, which have brought about complete and comprehensive regulation of railroads and other carriers in this country, pose wholly different questions respecting the application of the Sherman Act to railroads from those which were before the Supreme Court in 1897 and 1898.

Another interesting and, we think, a pertinent observation is that only two suits were brought against the railroads and rate conferences for alleged violations of the Sherman Anti-Trust Act because of their rate-making practices and procedures between 1893 and 1894 and the institution of this case and the Georgia case in 1944. One suit was brought in 1910 against the western railroads and the Western Freight Traffic Bureau. The railroads at that time proposed increases in rates. The commission had not been given power to suspend increases in rates. An injunction was issued restraining the railroads from increasing their rates. Following the issuance of this injunction Congress, by the amendments of 1910 to which I have just referred, empowered the commission to suspend the increases in rates. The railroads withdrew the proposed increases and later refiled them with the commission. The commission suspended the rates and following hearings found that they were unlawful. The Department of Justice dismissed the suit which it had brought, the attorney general stating in his annual report, and I quote:

> The (injunction) bill having accomplished its purpose and Congress having by the law of June 25, 1910, made adequate provision for dealing with the subject, the suit was discontinued.

The department later, in 1910, brought a suit against the St. Louis Traffic Bureau and railroads serving East St. Louis and St. Louis to restrain them from making certain changes in the rates on coal. This suit was dismissed after the commission had taken jurisdiction of the subject matter.

Changed Policies

Thus the Department of Justice through the years assumed that the regulation provided for in the Interstate Commerce Act, as administered by the commission, was a complete protection to the public interest. Indeed, as late as 1940, the department, in a brief filed in the Supreme Court in the case of *Federal Communications Commission v. Sanders Radio Station*, 309 U. S. 470, said:

> There is an essential difference between the present statute and legislation such as the Interstate Commerce Act which regulates the manner in which a public utility shall be operated. In the regulation of railroads Congress has taken over control of the rates and charges which may be collected and has otherwise assumed authority to prescribe the manner in which the business shall be conducted. The Transportation Act of 1920 was designed to effectuate that control for the primary purpose of assuring the public an adequate and efficient transportation system. In other words, in the case of the railroads there has been a substitution of government regulation for competition as a means of protecting the public interest.

The Supreme Court when it came to decide this case, adopting almost the very language of the Department of Justice, said:

> . . . Congress has not, in its regulatory scheme (respecting broadcasting), abandoned the principle

of free competition, as it has done in the case of railroads, in respect of which regulation involves the suppression of wasteful practices due to competition, the regulation of rates and charges, and other measures which are unnecessary if free competition is to be permitted.

The Department of Justice, of course, can change its policies as men change. This seems to be what it has done. We think, however, that we are justified in pausing to call attention to the attitude of the department during a period of half a century.

Another fundamental distinction between the railroad industry and these industries whose prices are subject to no regulation or control whatever is that the rate structure of the railroads constitutes a wholly different fabric and structure of rates from the price structure of the unregulated industries, such as the oil companies, the tobacco companies, and the pottery companies.

Rate-Making Standards

In the first place, the railroads in their initiation of rates have before them standards of rates laid down in the Interstate Commerce Act and the principles of rate-making evolved by the commission over a period of sixty years in its administration of the act. These principles are found in the decisions of the commission, contained as I have said, in some 312 volumes of printed reports. The heart of the act is of course found in Sections 1, 2 and 3, which enumerate these standards. Rates must be just and reasonable. They must not unduly discriminate. They must not be unduly preferential or prejudicial. And at the same time they must be on a level which will enable the railroads to maintain an adequate system of transportation. Indeed, we think it is of the greatest significance that in the rule of rate-making (Section 15a), the commission, as we have pointed out, in prescribing just and reasonable rates is admonished to give due consideration among other factors

. . . to the need of revenues sufficient to enable the carriers under honest, economical and efficient management to provide such service.

No similar standard of prices has ever been set up by Congress for unregulated industries. And Congress has not in the case of these unregulated industries ever displayed the concern for adequate revenues which it has displayed in the case of the railroads and other carriers subject to regulation.

But Congress did not stop with announcing standards to guide the administrative discretion of the commission in the cases as they come before it. In 1940 it announced a Declaration of National Transportation Policy, to which I have heretofore referred, and it concluded this Declaration of National Transportation Policy with the statement that all the provisions of the act should be administered and enforced with a view of carrying out that declaration.

The railroads, when they come to consider changes in rates, must consider, therefore, not only these high standards of the act and this Congressional Declaration of National Transportation Policy, but they must also consider the principles of rate-making and the relationships of the rates which, as I have just said, are found in the decisions of the commission.

It will be observed that this Declaration of National Transportation Policy is not addressed specifically to the commission. It is plain that the declaration is to guide and to govern all who have anything to do with the administration and enforcement of the provisions of the Interstate Commerce Act. I have just shown by references to the act that the great substantive provisions of the act are addressed in the first instance to the carriers themselves. The very concept of a national transportation system, adequate for the purposes specified in the declaration, precludes the belief that Congress intended to forbid such cooperation and conference among the carriers composing that system as are required to enable those carriers to meet the duties and responsibilities imposed upon them by the act.

The commission in a long line of cases has held that in fixing rates the commission will have regard not altogether to one particular railroad; that it will not fix rates from the standpoint of that railroad alone which could handle the traffic most cheaply, but that it will have regard to the entire situation, and will consider the effects of whatever order it might make upon all the railroads.

All these decisions and many others of like tenor and the act itself emphasize the duty of the individual carrier in proposing rate changes to consider how those changes would compare with the rates of other carriers in the same and other territories; how they would affect rate relationships and shippers on other railroads, how they would affect the other territories, how they would affect the rate structure and consequently the revenues of the carriers as a whole, and whether they would strengthen or weaken an adequate system of transportation. These matters cannot be intelligently or fairly determined by one carrier acting in a vacuum. All these matters can be determined only through conference, consultation and collaboration.

The commission has recently said in another case (*Summer & Co. v. Erie Railroad Co.*, 262 I. C. C. 49, p. 63) that the rates there in issue like all other individual rates are parts of an integral whole.

It is these standards in the act and their application by the commission and by the railroads in their initiation of rates which have tied together the rates of this country into a rate fabric.

The prices of cigarettes, of oil, of chinaware, and of lumber can differ in different localities without a resulting discrimination.

An oil company may charge different prices in different communities provided, of course, it does not attempt to destroy competition, because it is under no obligation to accord non-discriminatory treatment to all communities or localities. It can take its profits where it finds them.

But railroads individually and now collectively under Section 3 may not unduly prejudice persons, places, localities or regions. Section 3 was amended in 1940 so as to prohibit undue prejudice against a region or a territory. The proper construction of this provision has been before the Supreme Court in the so-called Class Rate Case in which the commission entered an order requiring reductions in the class rates in the South and the West and increases in the class rates in the East and made findings which look eventually to establishment of a uniform rate structure in the territory east of the Rocky mountains.

Consultation, conference and collaboration are but the result of these characteristics of the railroad rate structure, all to the end that the rates initiated by the railroads may within human limitations conform to the standards found in the Interstate Commerce Act and to the principles of rate-making and to the relationships of rates that have been established by the Interstate Commerce Commission.

Continuous Supervision

The commission has many times recognized that these standards of rate-making found in the act, and these principles and relationships in rates fixed by the commission are addressed just as much to the railroads as they are to the commission itself.

To suggest that the railroads may not adopt ways and means that are fair, reasonable and open, with a view of enabling them to initiate rates which will meet the standards in the act and promote the policies that Congress found in the Declaration of National Transportation Policy, is to say that the railroads are under the duty of following a procedure that will thwart the purposes of the act and of Congress, and which will render difficult if not impossible the tasks of regulation.

Another fundamental difference between the railroads and unregulated industries is that the rates of the railroads have been and are under continuous administrative supervision. The Supreme Court itself said in *United States v. Socony Oil Company*, 310 U. S. 150 (p. 221):

The reasonableness of prices has no constancy due to the dynamic quality of business facts underlying price structures. Those who fixed reasonable prices today would perpetuate unreasonable prices tomorrow, since those prices would not be subject to continuous administrative supervision and readjustment in the light of changed conditions. Those who controlled the prices would control or effectively dominate the market. And those who were in that strategic position would have it in their power to destroy or drastically impair the competitive system.

The 312 printed volumes of the commission's reports show the extent to which the rate structure of this country, to use the language of the Supreme Court, has been under continuous administrative supervision and the extent to which it has been readjusted in the light of changed conditions. The railroads have no power to perpetuate unreasonable rates.

The commission has fixed the rates on every commodity that moves in any substantial volume in Western territory. The great bulk of the traffic in this territory moves on rates that are the same or in some cases less than the rates fixed by the commission. The theory that one railroad acting in a vacuum could or should tamper with that rate structure without regard to the standards laid down in the act, without regard to the effect upon other shippers located on other railroads, upon other railroads themselves, other localities and other territories, is simply abhorrent to the whole theory and purpose of the Interstate Commerce Act.

Mr. Eastman's Views

The commission itself, moreover, has recognized over a period of fifty years the necessity of consultation, conference and collaboration on the part of the railroads in order that they may meet to the best of their ability the high standards of the act. For example, the commission said in its annual report for 1898, after the decision of the Supreme Court in the Joint Traffic Association case, that it was extremely difficult to see how the railroads could intelligently adjust their rates so as to fulfill the general requirements of the Interstate Commerce Act without the right to organize for the purpose of obtaining the necessary information and applying that information as the occasion requires. Later on, in 1901, speaking of rate conferences, the commission said it was difficult to see how the railroads could be operated with due regard to the interests of the shippers and the railroads without concerted action of the kind afforded by these conferences or associations.

Commissioner Joseph B. Eastman, in a statement before a Senate committee in 1943, said he was convinced that if the carriers were to respond to the duties and obligations imposed upon them by the Interstate Commerce Act, and if the rate structure is to be reasonably free from unjust discrimination and undue prejudice, if it is to be reasonably stable and sufficient for the financial needs of private ownership and operation, the carriers must be in a position to consult, confer and deal collectively with many phases of the matter. Commissioner Eastman's views were repeated by Chairman Aitchison very recently before the House committee on interstate and foreign commerce.

To say that the railroads may not take such action as is reasonably required to enable them to meet the responsibilities laid upon them by the act is to say that they should flaunt the public policy of Congress announced in the act and the high purposes which the act calls upon the carriers to attain.

How necessary it is that in approaching the issues in this case due consideration should be given to the standards of rate-making found in the act, to the principles of rates and the rate relationships fixed by the commission in its decisions and to the aims of Congress as set out in the Declaration of National Transportation Policy, is shown by the language used by the Supreme Court in the Georgia anti-trust case. The court, after taking pains to point out (324 U. S. 459) that the bill filed by Georgia does not seek to have the court act in the place of the commission, said that the bill seeks to put an end to discriminatory and coercive practices, and that this is not to undercut or impair the primary jurisdiction of the commission over rates.

And still sounding a note of caution, the Supreme Court later said that it was not asked to enjoin what the commission might later approve or condone, and that it was not asked to trench on the domain of the commission.

These expressions give emphasis to what we previously said, that this case involves not only the Sherman Anti-Trust Act but the Interstate Commerce Act and what the carriers may and should do under the act in carrying out the policies of Congress.

This court can take judicial notice of the decisions of the Supreme Court and of the Interstate Commerce Commission as well, involving the long list of railroad bankruptcies in Western territory. Only two railroads having any substantial mileage in Nebraska have escaped bankruptcy in recent years. The Western railroads in each of the years from 1932 to 1939, inclusive, failed as a whole to earn a sum sufficient to pay their fixed charges. In 1940 they earned their fixed charges by a very narrow margin and even the earnings of the war years from 1942 to 1945 on the average were less than the earnings in 1929.

All these facts show how necessary it is that the railroads in considering changes in rates, give weight to the effect of those changes upon their revenues and deal with those changes collectively and from the standpoint of the interests of the railroads as a whole.

The commission said that based on the estimated operations in 1947, the increase in wages resulting from the 1941, 1943 and 1946 wage increases and payroll taxes would be $1,655,240,000, and the increase in the cost of materials and supplies since 1939 would be $521,000,000, a total of $2,176,000,000.

Obviously it requires adequate rates to enable the railroads to meet any such enormous increases in wages, cost of materials and supplies, and payroll taxes. The Monthly Comment on Transportation Statistics issued as late as April 9, 1947, by the commission's Bureau of Transport Economics and Statistics, shows that the average straight time compensation of railroad employees in 1946 was 52.3 per cent greater than it was in 1939. The railroads in 1947 will pay to the United States Government under the Railroad Unemployment Compensation Act and under the Railroad Retirement Act payroll taxes amounting to $350,000. This tax item alone shows how necessary it is that the railroads work together in the maintenance of a rate structure that will enable the railroads to meet their responsibilities and obligations under the social and labor policies of Congress.

In the Public Interest

It has seemed to us that the government itself, and we include in that all the departments of the government, including the Department of Justice, has failed to give the weight that should be given to that statement in the Declaration of National Transportation Policy that one of the aims is to encourage fair wages and equitable working conditions. It requires the maintenance of adequate rates to enable the railroads of this country to meet this aim in the Declaration of National Transportation Policy.

A comparison comes to mind which supplies the answer to the question whether the public interest is better protected by regulation than by competition. Railroad freight rates stand today at 17.6 per cent over the rates in effect in 1929 and 1940; the railroads had no permanent increases in the general level of all their rates until the decisions of the commission in 1946, to which I have just referred. The last report of the Bureau of Labor Statistics shows that the wholesale price index of manufactured goods in 1947 was 67 per cent above the average for 1939-41, while farm products had risen 137 per cent and foodstuffs 116.6 per cent above the 1939-41 level. Yet we are now confronted with the theory of the Department that competition will better serve to protect the public interest in freight rates than regulation!

An Evaluation of Railroad Motive Power

The four fundamentals applied to the comparative performance of steam, Diesel-electric and electric locomotives — Prospective types appraised

PART II

By P. W. KIEFER

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AS a measure of locomotive potentialities in passenger-train duty, data were assembled for steam, electric, and Diesel-electric operations during 1946 which indicate the comparative degree of availability and utilization for each of these kinds of motive power.

In that year, six 4,000-b.hp. two-unit Diesels were used regularly on three westbound and three eastbound schedules, one in each direction between Harmon, N. Y., and Chicago, and two between Harmon and Mattoon, Ill., the assigned train-service mileage per day being, respectively, 928 and 1,000. The six locomotives accumulated a total of 2,089,563 miles in 12 months—an average of 29,021 per engine per month, or 954 per day.

Beginning in October of the same year, six of the S-1 class 4-8-4 type steam locomotives, including the one equipped with poppet valves, were assigned to three westbound and three eastbound runs between Harmon and Chicago. Up to the end of November, the accumulated mileage was 314,014, representing an average per engine of 26,168 miles monthly, or 858 per day.

The strike in the bituminous coal mines caused a disruption of this arrangement for 13 days during December, and the engines were assigned to other runs in this period. The total mileage for the three months beginning October 1 was 455,404, or an average of 25,300 miles per month per engine.

Comparative Performance

An analysis of the records of the two Diesels and six Class S-1 for 15 consecutive days during October is set forth in Table II, as comparative potential performance on a yearly basis, Harmon to Chicago, under conditions prevailing during favorable weather when the steam locomotives are less susceptible to delays and failures and relative better performance can be expected than for the full 12-month cycle.

The actual average mileage obtained in the entire month of October was 28,954 for the two Diesels and 27,221 for the six steam.

In this operation, both types of power were given the same attention at terminals, but the Diesels were under repair and inspection daily for 21.74 per cent of the time vs. 17.75 per cent for the steam. This accounts for the difference in hours unavailable, Line 6. On the other hand, the time out of service for shopping and periodical required inspections was 3.29 per cent of total hours, Line 1, for Diesels and 7.67 per cent for steam, which produced a lower potential in hours of use for the steam, offset to some extent by the slightly longer steam schedules and resulting in the total hours used, Line 4, and per cent utilization, Line 7, being less for steam than for Diesel. The availability ratio, Line 8, representing the total hours used and hours held waiting, involves the three factors and is almost identical for both classes of power.

For year-'round operation, such performance cannot be expected of the steam power with its inherent disabilities increased during severe winter weather, and the annual mileage anticipated would be less than given in the tabulation. With a conservatively estimated allowance for additional out-of-service time for steam because of increased inherent disabilities during severe winter weather, the following comparative evaluation for potential utilization and availability was revealed from this study:

	Diesel	Steam
Annual mileage	324,000	288,000
Average miles per month	27,000	24,000
Utilization, per cent of total annual hours	70.4	63.0
Availability, per cent of total annual hours	74.2	69.0

To appraise the possibilities of on-time performance of steam and Diesel-electrics in the handling of passenger trains a study was made of delays en route and at division terminals between Harmon and Buffalo, N. Y., 403 miles, for six S-1 class 4-8-4 type steam and six 4,000-b.hp. Diesel-electrics in through service on the most important trains during the month of October, 1946.

Table II—Annual Potential Performance Per Locomotive—Passenger Service

(Based on 15 consecutive days' service between Harmon, N. Y., and Chicago during October, 1946)

Line No.		Diesel	Steam
1	Total hours (365 x 24)	8,760	8,760
2	Hours for shopping and periodic inspections	288	672
3	Assigned hours (1) – (2)	8,472	8,088
4	Hours used	6,292	6,080
5	Hours available, not used	338	573
6	Hours unavailable	1,842	1,435
7	Per cent utilization (4) ÷ (1)	71.8	69.4
8	Per cent availability [(4) + (5)] ÷ (1)	75.7	75.9
9	Mileage operated	329,934	314,694
10	Average miles per month (9) ÷ 12	27,496	26,226
11	Average miles per day (9) ÷ 365	904	862
12	Average m.p.h. (overall schedules)	52.44	51.75

Steam's Handicaps

Both types of power received the same preferred attention at terminals, and coal of a somewhat higher grade than normal was provided for the steam units. The records of 356 trains,—179 for the steam and 177 for the Diesels—were examined, with the following average results in minutes:

	Diesel	Steam
Gross delay	16.1	21.1
Running time made up	13.9	17.6
Net time late at final terminal	2.2	3.5
Gross delay chargeable to locomotive	1.3	1.2

Of the total number of trains involved, the number recorded as on time was 134, or 75 per cent, for steam, and 126, or 71 per cent, for Diesels, with average delay chargeable to the locomotive practically negligible for both classes of power. Running time made up nearly compensated for the delays en route and at terminals. The relatively more stable performance of the Diesel was accomplished with the same size trains as for the steam, although rated horsepower was about one-third less, but full capacity of the steam could not be utilized because of train length and other limitations.

Electric locomotives having no self-contained prime mover can be expected to possess inherently greater availability

than either steam or Diesel. Experience on electrified portions of the New York Central System and other railroads of the United States confirms this potentiality. Utilization is also higher where the length of runs and the arrangement of train schedules permit. In the short distance of 33 miles between New York and Harmon, with highly congested traffic and many trains arriving at New York during the morning hours, with late afternoon and evening departures, opportunity for intensive use over the 24-hr. cycle is limited and the utilization, as a percentage of total time, is low. For the single revenue run in one direction an average of about 1.5 total locomotive-hours is required and an average of about two round trips is made daily, although this is occasionally exceeded.

Steam locomotives labor under several handicaps not applicable to Diesels or electrics, and severe winter weather accentuates these difficulties. Poor coal and low steam pressure, shortage of coal and water, ash-hopper defects and disposal of ashes, heating of friction-type crank pin and other journals, broken machinery parts, failure of piston and valve packing, defective feedwater equipment, and water-scooping apparatus all contribute to failures and delays en route and to late arrivals at terminal points, peculiar to steam only. In some cases these disabilities affect power output. Diesel and electric motive power suffer no diminution of efficiency or capacity under low-temperature conditions.

Out-of-Service Time

Considerable progress has been and is currently being made to reduce these difficulties and resulting delays chargeable to modern reciprocating steam. Roller bearings on axles, crank pins and valve gear, the use of alloy steel for machinery parts, refinements in design and insistence on careful workmanship have been of great help, and the provision of larger ash hoppers has permitted longer runs between servicings. Ash-hopper servicing en route still constitutes a serious bottleneck in the maintenance of fast schedules, particularly during cold weather when it is often necessary to thaw out the hopper in order to discharge the ashes and clinkers. The necessity of refueling at intermediate points and delivering the semi-frozen fuel to the stoker screws, even with the high-capacity steam-operated coal pushers on large-capacity tenders now in use, remains as a serious cause of delay.

Reciprocating steam locomotives also are out of service a greater portion of the total time than the Diesel for shopping and regular terminal attention and maintenance, including governmental inspection requirements. A careful study

Table III—Annual Potential Performance per Locomotive—Freight Service

(Based on 17 consecutive days' service during October, 1944)

Line No.		Diesel	Steam
1	Total hours (365 x 24)	8,760	8,760
2	Hours for shopping and periodic inspections	216	696
3	Assigned hours (1) – (2)	8,544	8,064
4	Hours used	7,219	7,023
5	Hours available, not used	349	252
6	Hours unavailable	976	789
7	Per cent utilization (4) ÷ (1)	82.4	80.2
8	Per cent availability [(4) + (5)] ÷ (1)	86.4	83.0
9	Mileage operated	137,450	118,237
10	Average miles per month (9) ÷ 12	11,454	9,853
11	Average miles per day (9) ÷ 365	377	324

indicates that over a period of one year, for high-mileage locomotives in Harmon-Chicago service, excluding unforeseen contingencies and operating emergencies, the through-service steam is unavailable a minimum of 28 and the Diesel 12 days. This reduces the potential utilization and mileage of steam, but is inherently characteristic with its high-capacity boiler and relatively complicated reciprocating machinery. Some further improvement can probably be effected in the time required for shopping and for periodic inspection, but it is probable that the Diesel will retain the advantages in this respect.

It is possible that in the future development of reciprocating steam some of the principles and devices proposed for use in the pulverized-coal-burning gas-turbine and steam-turbine motive power may be adapted, particularly with reference to the use of coal fuel and the disposal of ashes and other solid residue of the combustion process.

The Diesel locomotive is subject to certain maintenance difficulties not encountered on steam. The engine itself contains a multiplicity of reciprocating parts in the form of pistons, valves, and related mechanism with which there is a continuing possibility of failure. While not necessarily resulting in locomotive cut-out, sufficient reduction in capacity may take place for delay en route, particularly with the one- or two-unit locomotive. The water and cooling systems occasionally give trouble and the motors are subject to overheating, but this is relatively rare. Heating of long trains in extremely cold weather has always presented difficulties, and the inadequate equipment heretofore furnished on the Diesels has been a constant source of trouble.

The electric locomotive offers to date the best possibilities for eliminating delays en route due to motive power largely because it does not include a self-contained power plant and related apparatus and, with its greater power input during accelerations, it can readily make up more time following train detentions for various reasons.

Troubles with the electric consist principally of motor flashover, hot motor bearings, and failure of auxiliary equipment. Power supply failure may occur, but experience has shown that little interruption of service is encountered on this account and that this kind of motive power is the best available, or even now contemplated, for minimum delays and maximum utilization. Because it has fewer moving parts, failures on the road are negligible and terminal time for inspection, servicing, and repairs is less than for other forms of power.

Freight Service

The eight Diesel cabs of 1,350 b.hp. capacity which were acquired in 1944 have been in service continuously since their delivery, most of the time as two-unit 2,700-b.hp. combinations. In the year 1945 when they were thus used, the total mileage for the four locomotives was 506,608, equal to an average of 10,554 miles each per month.

In July, 1946, two additional cabs were added and since that time the 10 units have been operated as four locomotives, two comprised of three units each and two of two units each. The average miles per locomotive per month in 1946 was about 10,000.

Analysis of the performance of two 5,400-b.hp. Diesels vs. two modern steam freight locomotives of about the same indicated horsepower capacity, in comparable service, was made for a check period of 17 days in October, 1944. In Table III the results are translated into terms of maximum potential yearly performance.

During the period studied, every effort was made to keep the engines in service and avoid delays at terminals. Favorable weather conditions also contributed to the excellent performance.

Records of actual use over extended periods indicate that for year-'round operation an approximate average monthly mileage of 10,000 for Diesels and 8,500 for steam can reasonably be expected and should be obtained when receiving equivalent attention. With these mileages, the percentages of utilization and availability are evaluated as follows:

	Diesel	Steam
Annual mileage	120,000	102,000
Average miles per month	10,000	8,500
Utilization, per cent of total hours	70.1	63.5
Availability, per cent of total hours	73.5	65.7

Proposed New Types Appraised

The most attractive present development is the gas-turbine, promising all the advantages of the Diesel, plus the rotating prime mover and low fuel consumption when produced for the successful use of pulverized coal.

For constructive contribution to the possibilities of the pulverized-coal-fired

steam-turbine-electric, the high-pressure water-tube boiler offers the advantages of higher steam temperatures and improvement in ash disposal and, if harmful slag deposits can be eliminated therefrom, this kind of locomotive should become a competitor of the Diesel unless total cost is found to be excessive.

The stoker-fired coal-burning steam turbine will also have the advantages of rotatively applied power and the complete absence of cylinders and valves with related reciprocating parts for greater continuity of operation, although, with the conventional boiler and ash pan, it is not expected to equal the Diesel.

Costs of Ownership and Use

For analysis, this important fundamental is here divided into its two chief component parts: first costs and resulting annual fixed charges, and operating costs consisting principally of fuel, repairs and crew wages.

First Costs—Prices as of December, 1946, indicate the following approximate relationships among reciprocating steam (taken as 100), the Diesel-electric and the straight electric:

	Complete locomotive	Per hp.
4-8-4 type steam, 6,000 nominal i.hp. (inluding high-capacity tender)	100	100
Diesel electric:		
6,000 b.hp.	214	214
4,000 b.hp.	147	221
Straight electric, 5,000 continuous rated horsepower	114	137

Annual Operating Costs—For steam, Diesel, and electric annual operating costs per mile in daily fast, heavy passenger-train movements, through without engine change, Harmon-Chicago, are shown in Table IV, the result of detailed study for comparison of locomotives of equivalent power.

These data apply only to one representative railroad and the class of service indicated. It follows that, of necessity, each railroad should establish its own figures to determine the economic advisability of the different types of power. It is especially noteworthy that an increase of as little as one cent per mile added to 1946 costs for the item of either repairs or fuel amounts to some $3,000 per year per engine for the annual mileages given.

For the pulverized or stoker-fired coal-burning steam-turbine-electrics, and the gas-turbine-electric, determination of construction, operating, and overall costs of ownership must await actual experience. These steam-turbine locomotives, because of the absence of all reciprocating machinery, but with the added electrical and coal-handling equipment and the steam-generating plant, probably would approximate, or exceed, reciprocating steam power in maintenance costs, but with some saving in fuel

Table IV—Annual Motive-Power Operating Costs

Line No.		Steam, S-1, 4-8-4	Diesel, 4,000 b.hp. (2-unit)	Estimated Diesel, 6,000 b.hp. (3-unit)	Estimated Electric, 5,000 continuous hp.
1	Approximate relative first cost per locomotive (as of December, 1946)	100	147	214	114
2	Total annual mileage	288,000	324,000	324,000	324,000
	Cost per Mile				
3	Repairs	$.356	$.352	$.500	$.170
4	Fuel	.410	.280	.420	.400 (at .006 per kw. hr.)
5	(3) + (4)	.766	.632	.920	.570
6	Water	.031	.004	.005	.005
7	Lubrication	.011	.030	.045	.011
8	Other supplies	.005	.002	.002	.002
9	Enginehouse expense	.100	.100	.100	.020
10	Crew wages (two men)	.1944	.1979	.2046	.1927
11	Vacation allowance (3 per cent)	.0058	.0059	.0061	.0058
12	Social Security and unemployment tax (8.75 per cent)	.0175	.0178	.0184	.0174
13	Total per mile (operating)	1.1307	.9896	1.3011	.8239
	Total Cost				
14	Total annual operating cost	$325,642	$320,630	$421,556	$226,944
15	Fixed charges (interest, depreciation and insurance)	24,453	38,841	56,640	24,635
16	Total annual cost	$350,095	$359,471	$478,196	$291,579
17	Total annual cost per mile	$1.22	$1.11	$1.48	$.90*

* Fixed charges for substations and overhead contact system, which represent an important increment of cost for power delivered to the locomotive, are not included in this figure, but, for comparison in the service indicated, would average about 25 cents per mile, making the comparative total $1.15. This total, however, makes no provision for the cost of maintenance of substations and overhead contact system, which would amount to a substantial charge against the electric locomotive.

the overall operating cost might be about equal or less. The gas-turbine, if successful, will provide equal power at a large saving in fuel over either steam or Diesel and, having no boiler and little machinery other than for coal processing and handling, maintenance costs should be lowest except for the straight electric.

For both types, the overall economic results will be materially affected by the first cost. If it is found that the first cost of the gas-turbine locomotive may be brought to a figure comparable with the Diesel-electric of equivalent horsepower, it should provide substantial competition for that form of motive power.

Fig. 1* shows the progressive increase in drawbar capacity for reciprocating steam built during the last two decades, from the Class K-5 type, 4-6-2, to the S-1, 4-8-4. These curves, from which the detailed cut-off information has been omitted to simplify the composite chart, were developed during road tests using the dynamometer car under the direct supervision of qualified Equipment Engineering Department personnel, using suitable length trains. A second engine back of the test car was provided for close regulation of trailing-load resistance so as to insure the elimination of practically all acceleration effects during separate runs made to produce the required increments of the complete curve as here illustrated.

With approximately rated boiler pressure and the locomotive as a whole in reasonably good conditions, there is a cut-off for each incidental speed at which maximum power output is made available from a given design, irrespective of whether the capacity of the steam generating plant or the engine cylinders is the limiting factor. Any longer cut-off not only reduces the power output at that speed, but also is wasteful of steam

* See Part I, page 326, August 23 *Railway Age*.

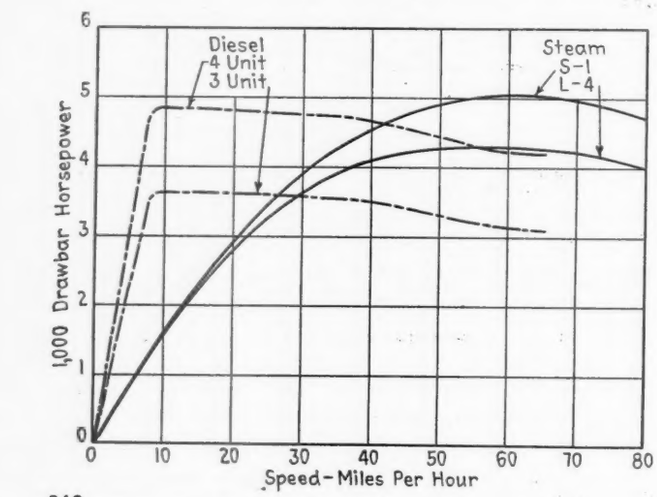
Table V—A Comparison of Maximum Acceleration Characteristics of Passenger Locomotives (from Fig. 4)

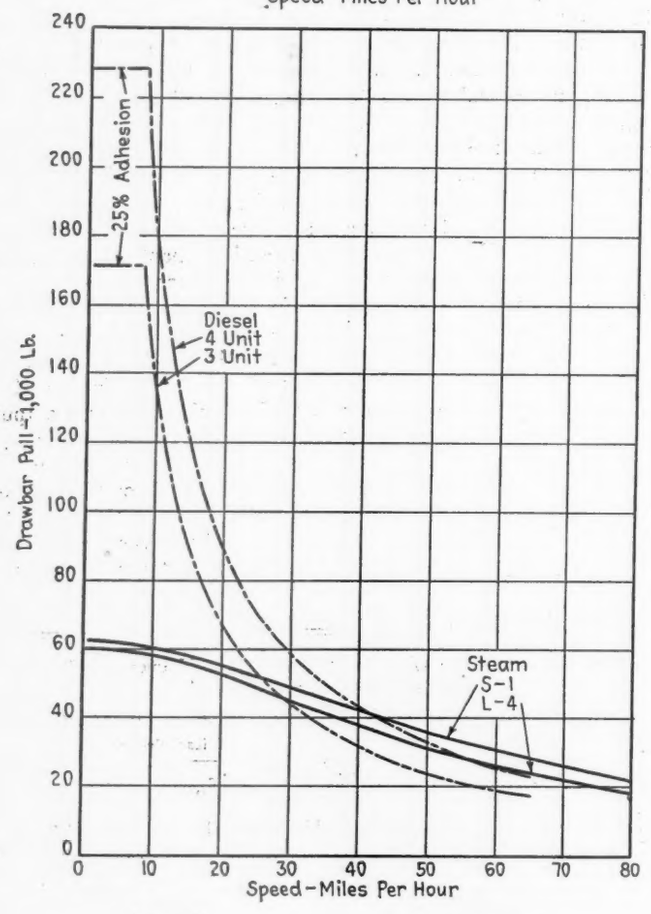
(Level tangent track—Fifteen air-conditioned passenger cars—1,005 tons)

Locomotive type	Steam		Diesel-electric		Electric
Locomotive class	J-3	S-1	2 units	3 units	
Wheel arrangement	4-6-4	4-8-4	2 (0-6-6-0)	3 (0-6-6-0)	4-6 + 6-4
Driving axles, no.	3	4	8	12	6
Horsepower rating	4,700 i.hp.	6,600 i.hp.	4,000 b.hp.	6,000 b.hp.	5,000 continuous rated hp.
Working pressure, lb. per sq. in.	275	275	...	...	...
Driving wheel diameter, in.	79	79	...	...	...
Balancing speed, m.p.h.	91	102	84	100.5	105
Acceleration, m.p.h.:	Min.-Miles	Min.-Miles	Min.-Miles	Min.-Miles	Min.-Miles
0-35	2.28 0.7	1.58 0.5	1.42 0.5	1.00 0.3	1.08 0.3
0-60	5.00 2.9	3.50 2.1	4.73 3.2	3.06 2.0	2.19 1.2
0-80	9.76 8.6	6.36 5.1	14.17 14.8	6.51 6.1	3.38 2.5
0-100	... ...	16.50 21.3	... ...	26.50 37.8	5.54 5.9
35-60	2.72 2.2	1.92 1.6	3.31 2.7	2.06 1.7	1.11 0.9
35-80	7.49 7.9	4.78 4.6	12.75 14.3	5.51 5.8	2.30 2.2
60-80	4.76 5.7	2.86 3.0	9.44 11.5	3.45 4.1	1.19 1.3

and fuel. At a shorter cut-off, the power output becomes less and it follows that there is a corresponding reduction in steam consumption.

By developing each increment of the pull-speed curve, the succession of cut-off points throughout the range of operating speed to produce maximum power is definitely established and consequently each portion of any such curve can be reproduced at any time in regular train service by using the proper cut-off in relation to speed. This type of operation is utilized for all system reciprocating steam road locomotives, freight and passenger, and is based on the principle of cut-off selection which can be applied directly and conveniently through the guidance of a device known as the Valve Pilot. By means of a duplex gage, this device indicates the speed and position of the cut-off at all times. Thus, full available capacity may currently be produced while accelerating to running speed and, thereafter, the cut-off may be shortened consistent with load, profile, and speed conditions.





Locomotive	Rated hp.
Diesel 4 unit	6,000 b.hp.
Diesel 3 unit	4,500 b.hp.
Steam S-1	6,600 i.hp.
Steam L-4	5,400 i.hp.

Fig. 2—Comparison of the characteristic curves of steam and Diesel-electric freight locomotives

As illustrated in Fig. 1, there has been a gradual increase during the 25-year period from 2,500 drawbar hp. at a speed of 45 m.p.h. obtained with a K-5 class to 5,050 drawbar hp. for the S-1, with 275 lb. per sq. in., an increase of 102 per cent. The curve for the S-1 with 290 lb. per sq. in. derived from the test with 275 lb. per sq. in. shows a maximum of 5,300 drawbar hp., an increase of 113 per cent over the K-5.

Figs. 2 and 3 show, respectively, the power characteristic curves for steam and Diesel-electric freight and for steam, Diesel-electric, and electric passenger power. The relatively constant horsepower of the Diesel engine is shown with the extremely high starting drawbar pull, but rapidly decreasing as the locomotive speed is advanced, until at the range of about 30 to 40 m.p.h. the Diesel and steam of equivalent maximum capacity have approximately the same drawbar pull and horsepower. Thereafter, the steam has the advantage. The electric locomotive, Fig. 3, because power for short-time rating is limited only by the adhesion of the wheels on the rails and the traction-motor characteristics, has higher capacity throughout the entire speed range than reciprocating steam and in excess of the Diesel at speeds over 30 m.p.h.

The Electric Rated First

Fig. 3 also includes curves representing the pounds resistance and equivalent horsepower of a 15-car air-conditioned train of 1,005 tons weight on level tangent track, which indicate the balancing speeds for the motive power shown. Fig. 4 illustrates the comparative acceleration characteristics of the three forms of power, with time plotted against speed and distance, in handling a 15-car passenger train on level tangent track. For convenient reading, Table V is given to show these characteristics up to speeds of 35, 60, 80, and 100 m.p.h. and from 35 and 60 m.p.h. to running speeds of 60 and 80 m.p.h., respectively.

While from the charts the 4,000-b.hp. Diesel might not be expected to equal the performance of the J-3 steam with its somewhat higher maximum horsepower even though the Diesel accelerates more rapidly up to 60 m.p.h., actually with trains of 15 or 16 modern cars, it has proved more effective in maintaining the fastest schedules between Harmon and Chicago.

Electric power has the advantage over both steam and Diesel in regaining speed from stops or slowdowns because its

excess reserve capacity permits accelerating the train at a much faster rate. As a train-handling unit only, the straight electric is the most satisfactory motive power available and, in this respect, it is not expected that new forms herein described, either under development or in use, will exceed it.

Both Diesels and electrics sometimes are run at higher speeds on curves and tangents than reciprocating steam in view of the lower center of gravity, generally lighter wheel loads, and complete absence of dynamic augment. However, the chief reason for moderate speed restriction of the reciprocating steam is to avoid increased maintenance costs as, if well designed, it is inherently capable of safe and suitable operation at present maximum speeds of other types.

For heavy-grade work, Diesels and electrics have a distinct advantage over reciprocating steam. With the former, the drawbar pull increases rapidly as the speed is reduced. This is true to a lesser degree of the latter. Consequently, slow-speed heavy pulls will not cause stalling when motor capacities are not exceeded, whereas, under similar conditions, the reciprocating engine may slip and stall. The constant torque and the adhesion characteristics of the Diesels and electrics are also of assistance in this respect and, with heavy trains, some double heading or helper service may be eliminated.

Any shortening of passenger-train schedules through increased speeds will require greater power output and higher cost, even though during recent years a definitely downward trend in passenger-train weights has been effected with lightweight streamline equipment of modern design. Regardless of this, more rather than less power is needed, especially for acceleration, if faster schedules are to be provided.

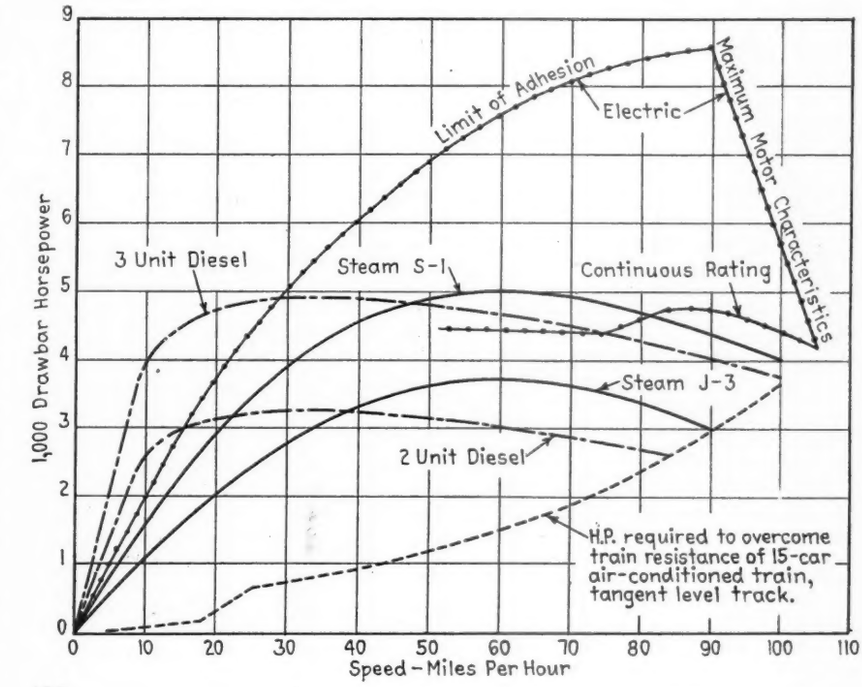
The Diesel's Advantages

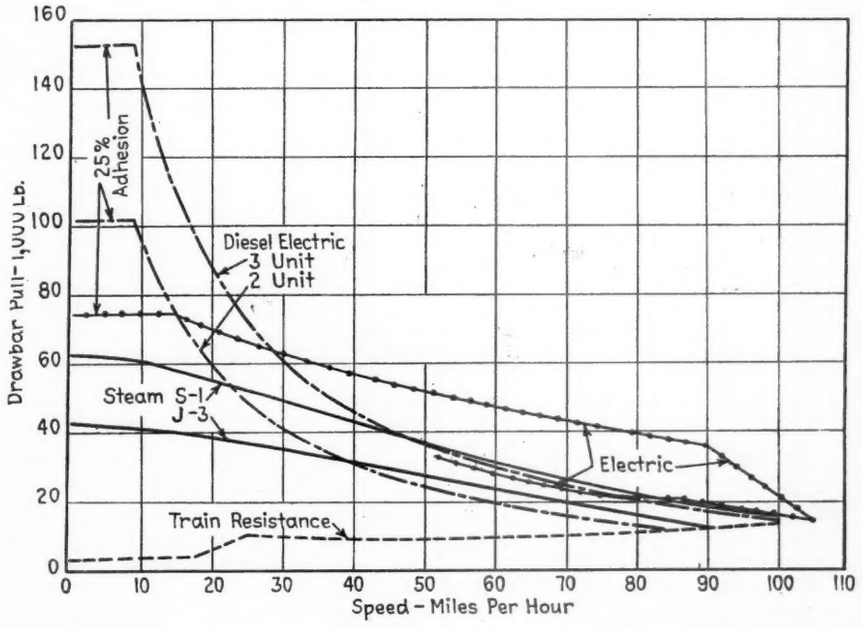
The advantages of Diesel-electrics over reciprocating steam may be summed up as follows: (1) little affected by cold weather; (2) lower center of gravity; (3) reduction in track stresses because of lighter wheel loading and absence of dynamic augment, but with this advantage partially offset because of the small-diameter wheels used throughout and the effects of lowered center of gravity; (4) somewhat better riding qualities; (5) less time required for servicing en route; (6) faster ecceleration at lower speeds; (7) cleaner operation; (8) higher availability and utilization.

With respect to practically all of the items enumerated, the straight electric is superior to the Diesel.

The Diesel capacity is bound to that of a self-contained power plant, whereas the straight electric is limited by adhesion, and surplus power normally is available at practically negligible additional costs.

The fundamental problem in shortening passenger-train schedules is primarily that of maintaining high average speed, which may most effectively be accomplished through reduction in the number of stops and slowdowns and by reducing the time unnecessarily used with the train at rest. An increase in maximum permissible speed reduces the overall time to some extent, but much more can be gained by raising the overall average speed to the extent found practicable. An analysis of a typical schedule, Harmon-Chicago, showed that the additional time required over the total scheduled running time at permissible speeds amounted to 210 min.—3 hrs. 30 min. of a total schedule time of 16 hrs. 45 min., or about 21 per cent—divided as follows: decelerating and accelerating to and from slow-downs,

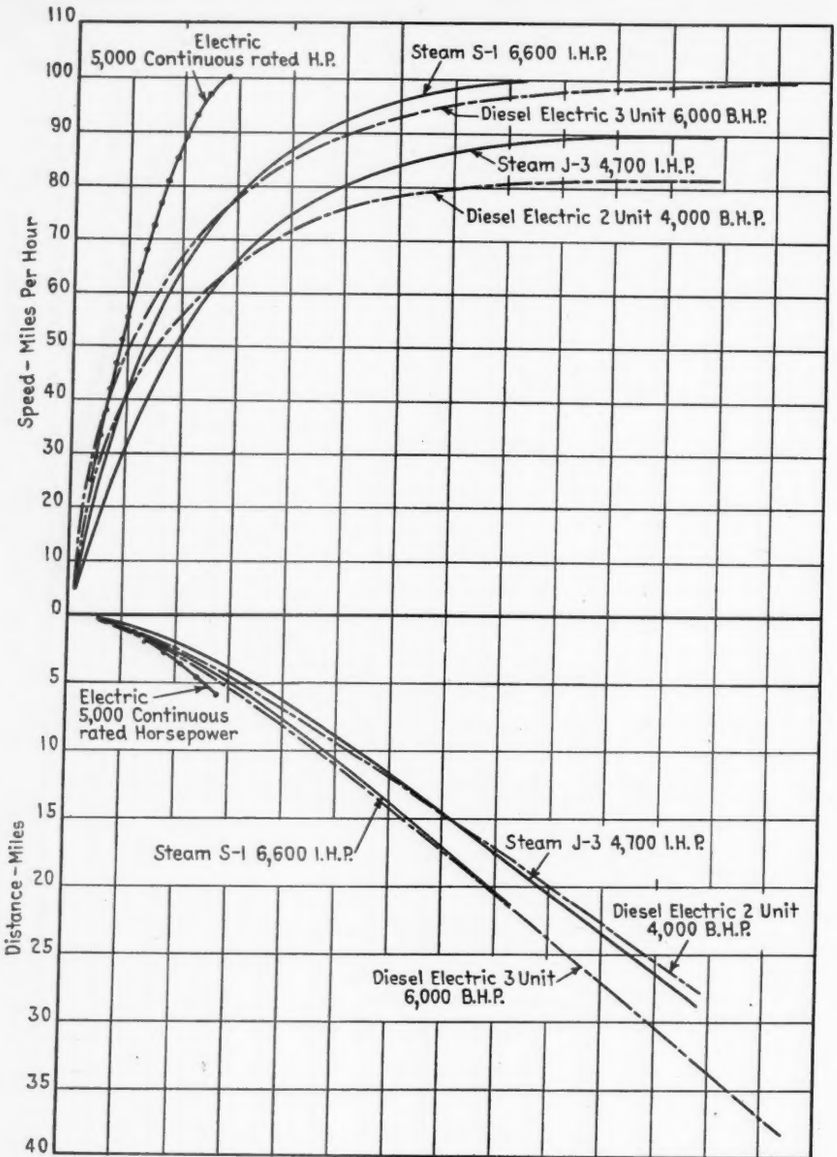




Locomotive	Rated hp.
Electric	5,000 contin.
Steam S-1	6,600 i.hp.
Steam J-3	4,700 i.hp.
Diesel 3 unit	6,000 b.hp.
Diesel 2 unit	4,000 b.hp.

Train resistance
15 Passenger cars:
1,005 tons
85 ft. coupled length each
Air conditioning and train lighting:
14 20-kw. generators
Cut-in speed, 18 - 25 m.p.h.
Average demand, 60 per cent

Fig. 3—Power characteristics of steam, electric, and Diesel-electric passenger locomotives on tangent, level track



Train resistance
W. J. Davis, Jr., Formulae
15 Cars:
1,005 tons
85 ft. coupled length each
Air conditioning and train lighting:
14 20-kw. generators
Cut-in speed, 18 - 25 m.p.h.
Average demand, 60 per cent

Uniform acceleration equation

$$S = \frac{70}{D.B.P.}\left(V_2^2 - V_1^2\right)$$

$$t = \frac{95.6}{D.B.P.}\left(V_2 - V_1\right)$$

S = Distance, ft.
t = Time, seconds
D.B.P. = Drawbar pull available for acceleration (Fig. 3), lb. per ton of train
V_1 = Lower speed, m.p.h.
V_2 = Higher speed, m.p.h.

Fig. 4—Maximum acceleration characteristic curves of steam, electric, and Diesel-electric on tangent, level track

52 min.; decelerating and accelerating to and from stops, 74 min.; timetable allowance for station stops, 62 min.; additional time required for station stops, 22 min.

The number of stops and local speed restrictions and the time thus sacrificed have an important effect on the maintenance of fast competitive schedules and obviously should be kept to the minimum practicable.

Certain of the delays peculiar to steam may be eliminated only by changing to Diesel or electric power, but most of the time lost is independent of the type of motive power as indicated elsewhere in this discussion.

Any reference to the overall thermal efficiency at the drawbar, in the performance efficiency equation usually affords an opportunity for considerable argument. The fact is not questioned that it is highly desirable to improve this characteristic, but it is believed prudent first to review some of the reasons for its relatively low value at the tender drawbar of reciprocating steam.

For reciprocating steam in heavy through service, the necessarily high horsepower requirement is accompanied by elevated combustion rates. This complete power plant, including all auxiliary equipment and its own fuel and water supply, is also handled successively by different engine crews on fast schedules, under widely fluctuating load requirements and, not infrequently, in dense traffic. While the same conditions pertaining to train handling are present also with other forms of motive power, none contains the variables inherent in the production of power from coal-burning reciprocating steam.

The efficiency at the drawbar is affected by the loads on the non-power-producing wheels and those of the tender which, for the latest designs, are the equivalent of two loaded cars having rail weights of 210,000 lb. each.

The retention of simplified design, particularly with respect to cylinders and valve gear, penalizes the thermal efficiency, but repayment is secured and augmented in terms of higher serviceability and reasonable freedom from excessive maintenance troubles and related delays on the road.

Although the overall thermal efficiency of the Diesel locomotive may be four to five times that of reciprocating steam, it should be recognized that without this advantage the cost of Diesel fuel oil would be prohibitive. As a practical fact, the margin in favor of the road Diesel on a fuel basis is of relatively little consequence for equivalent power at current costs for fuel.

Predicated on practice performance of Diesel-electric, straight electric, and reciprocating steam, and thermal analyses of power plants now under development, comparative overall efficiencies may be cited approximately as follows under conditions of fuel load in train service at a speed of about 65 m.p.h. with fuel of the average quality currently furnished: Diesel-electric, 22 per cent; straight electric, 17 per cent; pulverized-coal-burning gas-turbine-electric (estimated), 16 per cent; pulverized-coal-burning steam-turbine electric (estimated), 10 per cent; modern reciprocating steam, 6 per cent.

Summary of Evaluations

The primary measure of the value of a locomotive is its use. Motive power, when idle because of mechanical defects or other causes, represents a total loss of investment and constant expense and it is continually demonstrated in all service that maximum overall performance efficiency must be sought and secured by the use of units capable of providing consistently high mileage throughout their useful lives.

The relative evaluations given in Table VI are predicated upon:

(*Continued on page 51*)

Best Source Book on Motor Transport

One handy volume issued by A.A.R. contains all the basic facts and figures and presents the economic issues

THE Subcommittee on Motor Transport of the Railroad Committee for the Study of Transportation of the Association of American Railroads has issued its long-awaited report—a document of 215 double-column pages, illustrated with numerous charts and graphs and containing many tables of statistical information. There is no other single volume available from any other source which presents such a comprehensive array of the significant facts and figures about this important, and somewhat wayward, business; and which also outlines the unsolved economic and political problems which confront the nation from the Topsy-like growth of this husky adolescent of the transportation industry.

The report says flatly, and sets forth supporting evidence to prove, that present inadequate policies of highway finance fail to assess commercial highway traffic with its "fair share of highway costs," and, hence, produced results which "are the exact opposite of those the national transportation policy seeks to accomplish."

The subcommittee which prepared the report is headed by H. R. Lake, general manager, Department of Highway Motor Transport, Atchison, Topeka & Santa Fe.

The prediction that continued subsidies to motor transportation would thwart the carrying out of the national transportation policy comes after the subcommittee has observed that stronger competition lies ahead for "other transport agencies" if announced plans of "highway administrators" are consummated. At the same time it concedes that highway transport pays in part for its use of the highways, but insists that failure to pay a "fair share" is "particularly true of the users of the heavier vehicles."

Economy and Fitness Obscured

"If," the report continues, "one agency of transport provides all the facilities which it uses and pays all its costs of operation while a competing agency obtains its facilities, or a large part of them, free or for inadequate compensation, obviously rates cannot be fixed by regulation, or otherwise, which will properly reflect the true economy and fitness of the two agencies. Unless the total costs of transportation by each agency are borne by that agency, a system exists which undermines effective rate regulation. The result of subsidies is to obscure the inherent advantages of each agency, to foster unsound economic conditions, and to develop an unbalanced, inefficient and perhaps inadequate transportation system."

Figures given in the report put the 1920-40 expenditures (construction and maintenance) on highways and streets at $39,184,412,000, while the total highway user payments for the period were $14,386,495,000. Thus the highway users "failed to pay the cost by $24,797,917,000." Referring to previous investigations of this subsidy question, the report says that study groups which have found that the highway users, as a whole, are receiving very little, if any, subsidy "reached such a conclusion only after imposing on the general taxpayers more than one-half of total costs of building and maintaining the streets and highways—thus assigning less than one-half of the costs to the users of the facilities."

Major Factors of Growth

The report notes that the mileage of improved highways increased from 153,530 in 1904 to 1,127,674 in 1942, while the number of registered commercial motor vehicles increased from 0 in 1900 to 4,498,044 in 1941. It says that over 93 per cent of total highway truck hauls are under 50 miles, but the 7 per cent in excess of that mileage account for more than 50 per cent of the total net ton-miles on the highways. The "major factors" which contributed to the growth of commercial highway transport are summarized as follows:

Nationwide system of improved highways built and maintained with public funds.

Technological improvements and mass production in the automotive field.

Relative ease of entering the highway transport business.

Free reciprocity agreements among the states.

Various exemptions to regulations.

Sporadic enforcement of regulations.

Greater size and weight limitations.

Rates lower than those offered by other forms of transportation.

Wage scales lower than those of the railroads.

Less stringent packing requirements in some cases than those required by competitors.

Extent and completeness of service including pick-up and delivery.

Flexibility of service.

Delay in the regulation of interstate motor carriers until 1935.

Faster service on truck hauls up to first morning delivery than that offered by competitors.

Personalized service by truck and bus operators.

The improved highway, the report says, was first designed for the automobile and the small truck; but "the laws of the country had not caught up with the rapid development in the motor vehicle world, and there was nothing to prevent the long-haul operator from using these highways for the high speed movement of large and heavy trucks and truck-trains." Thus, "before the public realized it," the commercial motor vehicle in long-haul service had "enormously increased highway costs—first, by seriously damaging the pavements which were built for the automobile and light truck, and second, by making it necessary to build stronger and wider highways."

This development, the subcommittee continues, raised the question of whether the highway should be designed to fit the truck or the truck designed to fit the highway. It previously pointed out that in 1900 "the best macadam two-lane highway" cost about $9,000 per mile, the construction cost of highways generally having been less than $3,000 per mile at that time. It puts the present construct cost of a "modern rural two-lane highway" at $40,000 to $70,000 per mile, while a four-lane highway costs "from $100,000 to $700,000 per mile."

"As soon as the highways were made stronger to handle heavier trucks, then the trucking industry succeeded in getting legislative action which permitted still heavier and larger trucks," the report says. "This appears to be a vicious circle, which will go on forever unless the private motorist and the general taxpayer more fully appreciate that their rights are being interfered with, and that their motor vehicle and property taxes are and will continue to be higher because of the comparatively few large trucks requiring the very expensive highway."

Would Require I. C. C. Certificate

The subcommittee's specific recommendations are that highway administrators should give more attention (1) to the adequacy of motor vehicle rev-

enues as a whole to meet highway needs, and (2) a scientific method for allocating funds to state highways, secondary roads and city streets which will take into consideration traffic needs. It further recommends that existing laws be changed "so that no federal funds shall be allocated for the construction of a highway which is being built at a cost in excess of the amount necessary to construct a highway adequate for the use of private automobiles and light weight trucks until such construction has been approved by the Interstate Commerce Commission as being in the public interest."

"Very often in the past," the report says, "motor vehicle revenue has been arbitrarily allocated to certain classes of roads without a proper consideration of the needs and uses of the highway system as a whole. A concentration of available motor vehicle funds on heavy-duty trunk lines leaves less revenue available for the improvement of other roads—hence, the cost of maintaining and improving secondary highways and city streets has rested more heavily on the general taxpayer."

The subcommittee opposes overriding federal control of vehicle size and weight dimensions. It would leave that matter under the jurisdiction of "the proper state authority responsible for the safety and protection of life and property." A chart in the report shows that, in 1942, legal length limits for the longest combination of vehicles varied from Kentucky's 30 ft. to Nevada's "no restriction." Thirty-nine states had limits of 50 ft. or less.

With respect to the operation of commercial vehicles outside their home states, the report recommends that the states enter reciprocal agreements for issuances of special licenses to cover operations in states other than the home state "at equitable rates to be determined by the conditions which prevail." In this connection, the subcommittee recalled that the Joint Committee of Railroads and Highway Users in 1933 "unanimously recommended that a commercial motor vehicle operating outside of its home state should pay an additional fee." It adds, however, that the "automotive interests" have nevertheless "succeeded in having many states grant free reciprocity."

Equal Opportunity on Highway

Another recommendation of the Joint Committee of Railroads and Highway Users which the subcommittee likewise brings forward and makes its own is that stipulating that opportunity should be given for rail carriers to engage, either directly or through subsidiaries, in motor vehicle service on the highways "on equal terms with all others without discrimination in favor of or against other transportation agencies in the same field." This, the report added, should include the "right to purchase, equally with all others, lines in operation as well as to establish new lines." Of I. C. C. decisions on this matter of rail-highway coordinated service, the report says in another place that some determinations of the commission and its divisions "may be subject to criticism and they are not all consistent with one another, but it seems clear that a fairly consistent effort has been made and is being made to grant the type of authority the record will support. This is conclusively shown by the fact that many commission orders, both under the certificate provisions and the unification provisions of the act, contain no service restrictions whatever."

Loopholes in Regulation

The subcommittee's review of rail-highway coordinated operations brings out the fact that such services include pick-up and delivery; intra-terminal transfer; substitution for line-haul rail service in short-haul areas surrounding the larger points; and substitution for other line-haul rail service. It is also pointed out that the railroads have found through experience with their truck operations that "in order to perform an efficient coordinated rail-truck service in the public interest, it oftentimes is necessary that they be permitted to handle freight moving solely by truck as well as by rail-truck." At the same time the report asserts, that where the volume of passenger or freight traffic in the short-haul field is sufficient, the railroads "can frequently provide a cheaper or better transportation than the commercial motor vehicle."

On the matter of enforcement of motor carrier regulation, the report recommends that "adequate government funds and personnel" be provided for that purpose. At present, it says, enforcement is not fully accomplished, and that situation "places motor carriers that do comply with the regulations at a disadvantage." It also "gives the violators an unfair competitive advantage over other transportation agencies that are closely regulated."

Further tightening of regulation is proposed in the report's next recommendation calling for the removal of exemptions now applicable to "numerous and important operations by motor vehicles," such as the carriage of ordinary livestock, fish or agricultural commodities. A stricter definition of the private carrier is also recommended, for the subcommittee found that "numerous operations" now accepted as private carriage "are detrimental to regulated carriers of property and should be regulated." Its specific recommendation in this connection is that the regulatory laws should define the private carrier as "one who hauls his own products in his own vehicles as a necessary function of his business which is other than transportation, and who receives no compensation for transportation either directly or indirectly."

The subcommittee would also have something done about the so-called "itinerant peddler" or "gypsy trucker," who "conducts extensive operations over the highways which are demoralizing to local markets, injurious to essential established business, and contrary to public interest." That recommendation is set out as follows:

"Any private carrier of property who engages in the transportation on the highway of any commodity not of his own production, for hire or for the purpose of sale by such carrier as principal or agent, unless he has a bona fide established place or places of business regularly and continuously used for sale of such commodity, and any private carrier of persons who arranges as agent or principal to transport passengers on a share-expense or other irregular fare basis, should be required: To secure a license to operate from the duly authorized regulatory authority; to have financial responsibility or adequate provision for surety or insurance, bond or agreement, for protection of other users of highways, passengers, shippers and the general public; and in the interest of public safety on highways, to meet requirements as to qualifications and hours of service for drivers, as prescribed by regulatory authority."

Future of Motor Transport

Looking to the future of motor transportation, the report says that trucks will handle a total ton-mileage "at least equal to prewar proportions and probably greater." The subcommittee also finds indications that the percentage of all motor freight traffic which will be handled by private operators will increase above its prewar figure of 50 to 60 per cent. As the report points out, "this means that in the future a greater proportion of highway traffic will move free from the kind of regulations accorded the for-hire carriers."

Meanwhile the bus and truck operators are expected to continue their policy of offering "constantly improved equipment and service to the public." While it points out that increased costs have brought increased rates for highway service, the subcommittee suggests that more liberal size and weight limits, lightweight vehicles and other equipment improvements will tend to reduce expenses. It adds, however, that "the total operating costs will be dependent to a large extent upon future wage rates, taxes, fuel and tire costs, and cost of equipment."

I.C.C. Gets Rate-Increase Pleas

Railroad officers who will support Ex Parte 166 petition submit statements of testimony they will offer at forthcoming public hearings

COMPLYING with the Interstate Commerce Commission's order of July 24, witnesses who will appear in behalf of the petitioning railroads in Ex Parte 166, wherein the carriers seek freight rate increases calculated to yield more than a billion dollars a year in additional annual revenues, last week filed with the commission copies of statements and exhibits which they will offer as evidence at the hearings starting September 9 in Washington, D. C. A summary of the railroads' overall presentation appeared in *Railway Age* of August 23, page 54.

As noted in *Railway Age* of July 12, page 85, the carriers are seeking general increases of 25 per cent within Official territory and interterritorially between that territory and other territories, and 15 per cent within Southern and Western territories and interterritorially between those territories. The proposed tariffs, according to the railroads, would raise freight charges for the country as a whole by approximately 17 per cent.

Prospective railroad witnesses from whom the commission has received statements include Dr. J. H. Parmelee, vice-president of the Association of American Railroads and director of its Bureau of Railway Economics; W. S. Franklin, vice president, traffic, Pennsylvania; R. B. White, president, Baltimore & Ohio; R. J. Doss, vice-president, Atlantic Coast Line; H. S. Palmer, trustee and president, New York, New Haven & Hartford; P. J. Neff, chief executive officer, Missouri Pacific; Wayne A. Johnston, president, Illinois Central; E. Rigg, assistant freight traffic officer, Chicago, Rock Island & Pacific; W. S. Hackworth, president, Nashville, Chattanooga & St. Louis; M. J. Wise, vice-president, Central of Georgia; R. E. Woodruff, president, Erie; R. L. Williams, president, Chicago & North Western; L. L. Knight, comptroller, Seaboard Air Line; and G. F. Vivian, manager, statistical bureau, Western lines.

Those who have submitted verified statements include W. J. Kelly, assistant to the vice-president, traffic, A. A. R., whose statement is confined to the explanation and justification of the rule for disposition of fractions and the rule for application of the proposed increases to combination rates made by combining separately stated rates. Other verified statements have come from H. J. McKenna, assistant general freight agent, Minneapolis, St. Paul & Sault Ste. Marie; V. P. Brown, general freight agent, Great Northern; and H. K. Dougan, assistant general auditor, G. N. These statements relate to proposed increases in rates on iron ore as applied to roads in the Lake Superior area.

Dr. Parmelee's Presentation

Dr. Parmelee, principal witness for the carriers, will tell the commission that despite relatively large traffic volumes and despite the Ex Parte 162 increase of 17.6 per cent, which became effective January 1, the railroads' rate of return, considering wages and prices as of June 30, will be about 3¼ per cent on net investment for 1947 and less than 2½ per cent for 1948, as compared with a 1946 average of 12.1 per cent for all manufacturing industries combined. He will testify that as of July 3, the Class I roads estimate a net railway operating income of $732,900,000 for 1947 and $542,200,000 for 1948.

According to Dr. Parmelee, the net railway operating income, on the basis of the Ex Parte 166 proposals, will be $1,207 million in 1948, representing a rate of return of 5.35 per cent. The A. A. R. officer will assert, however, that price increases since June will add about $150 million to annual operating costs and reduce the net railway income to approximately $1,100 million, or less than a 5 per cent return. At the same time, he will point out that while the proposed Ex Parte 166 increases are estimated to yield $1,232 in gross freight revenues, about 5 per cent will be absorbed in revisions, corrections and other adjustments, leaving the remaining $1,170 million to be applied to income account.

Dr. Parmelee also will tell the commission that (1) the long hauls of the war period contributed to the net earnings in that period, while the shorter hauls since have contributed and are contributing to more costly operations; (2) passenger service produced a deficit of $139 million in 1946 and the prospect is for an even greater deficit in 1947; (3) railroad employment in 1947 will be slightly below that of 1946, but the total payroll "seems likely" to be somewhat greater than in 1946; (4) as of August 14, prices of railway fuel, material and supplies had advanced by 8 per cent over June prices and since 1939 operating costs have increased more than 50 per cent; (5) net working capital decreased from $1,659 million at the end of 1945 to $1.094 million on May 31; and (6) dividends paid by the railroads during and since the war have been modest.

Referring specifically to the Pennsylvania, Mr. Franklin will inform the commission that "it must be obvious that a substantial increase in rates must be obtained" because of an increase of 126.6 per cent in expenses from 1940 to 1947, as compared with an increase of 86.8 per cent in total operating revenues. "From my own personal judgment, in view of the price advances since this case was filed, the petition should be revised and the increase for the Eastern roads raised so as to produce at least 50 per cent more gross than will result from this petition," Mr. Franklin will say, adding that "should this action be taken, it would still leave a relatively small advance as compared with a similar situation following World War I, and would not even then provide a proper return on the investment in railroad property."

Eastern Roads' Needs

Describing the Pennsylvania's estimated results for 1947 as "most disappointing," despite increases in freight and passenger rates, and noting that increases in wages, plus payroll taxes and the cost of materials and supplies since 1940 to June have been $266 million per year, Mr. Franklin will assert that the granting of the Ex Parte 166 proposed rates, if effective throughout 1948, would produce a net income of $58,532,000 for the Pennsylvania. He will then point out that increased costs of fuel and steel and tax adjustments will reduce that figure to about $50 million, which, he will contend, is "hardly what can be considered as fair for the company, as such operations would produce a return on net investment of only 4.3 per cent."

According to Mr. White, the B. & O.'s estimated net income for 1947 will be about $9,800,000 and the net railway operating income approximately $30,500,000. "This income," he will tell the commission, "will yield a rate of return on our depreciated investment of 3.15 per cent, which is slightly more than half of what it should be for the Baltimore & Ohio to pay the increased oper-

ating costs and to be able to rehabilitate the property to meet the needs of the future."

Mr. White, in his plea for increased rates, also will observe that the B. & O. (1) needs more than $9 million a year net income to finance its improvement program; (2) has been unable to pay a dividend since 1931; (3) plans to spend approximately $19 million in road improvements in 1947 and should spend $78 million in the next five to ten years; (4) since the end of the war, has spent $79 million for new equipment and plans to expend $97 million for freight cars, $6 million for passenger cars and $78 million for additional steam and Diesel locomotives within the next 10 years; and (5) in 1947, will be left with a balance of $41,206,000 of increased expenses for which no provision has been made.

Mr. Palmer will testify that the rate structure under which the reorganized New Haven will operate must produce sufficient revenues to meet operating expenses, taxes and charges, and a sufficient rate of return to permit reasonable annual improvements to its plant and assure sound credit. Mr. Palmer will observe that the New Haven, after 12 years in the courts, will shortly emerge from trusteeship, adding that the reduction by the commission of its capital structure has been "drastic" in that over $206 million of preferred and common stockholders' equity has been wiped out and that the approved plan results in a "thorough financial housecleaning."

Cheaper Dollars

"The decreased purchasing power of the dollar has been reflected in railway expenses on all sides," he will continue, asserting that the railroads are before the commission to "persuade you to recognize the economic value of the 1947 dollar." "In all other forms of economic activity, except transportation, the relationship between expenses and price of service has been quickly recognized by appropriate adjustments. A heavy taxpaying, unsubsidized and privately financed industry is before you asking for prompt relief. In my opinion, this commission should approve rates and charges that will permit the railroads of this country to earn a fair rate of return on their investment because the remainder of American economy is so dependent upon a strong rail transportation system. As I understand it, it is the primary responsibility of the commission to foster sound economic conditions in transportation.

Mr. Palmer will also inform the commission that the New Haven, in 1946—the highest traffic volume year in peacetime—had a net railway operating income deficit of $2,186,674 and a net income deficit of $9,510,788; its net income for 1947 is estimated at $5,085,000; and 1948 will produce a net deficit of $5,352,000, or a rate of return of less than one-half of 1 per cent on investment. "This," Mr. Palmer will testify, definitely demonstrates the necessity for the increased requested in this petition.

According to Mr. Woodruff, the railroads need the increased rates in order to provide them with money to pay for the tremendously increased expenses which have been added to railroad operation in recent years; make necessary improvements in railroad facilities so that continued progress can be made in the quality of service; and pay reasonable dividends and restore railroad credit in order to attract investment capital.

After informing the commission that the increases in revenue granted by it have been insufficient to meet the Erie's increased expenses since 1941 by $10,063,000 per year and that the Erie's rate of return was only 2.09 per cent in 1946, Mr. Woodruff will warn that the railroads should have an average rate of return of at least 6 per cent. "In 1946, the railroads earned only 2.75 per cent, and under present freight rates the earnings this year will be in the neighborhood of 3 per cent," he will testify in part. "No industry can long survive and fulfill its obligations to the public in an efficient manner under such low earnings."

Mr. Williams will relate that the North Western's net income for 1947, under the rates fixed in ExParte 162, will fail by $800,000 to yield 5 per cent on the present stock of the road, practically all of which was issued in reorganization in lieu of fixed-interest debt or defaulted interest thereon, and which does not take into account the "urgent requirement" of funds to progress a modernization program. The road's 1946 return on investment, according to Mr. Williams, was 2.04 per cent.

"The North Western is being and will continue to be confronted with a constantly increasing competitive situation from other types of transportation," Mr. Williams will continue in part. "We need to modernize our property . . . if we are to meet this situation. We will need money to do it."

The Missouri Pacific's 1947 net income, according to Mr. Neff, is estimated at 4 per cent—the same as in 1946—as compared with 6.5 per cent in 1941-45; 1.7 per cent in 1931-40; and 3.8 per cent in 1921-30. "If the Missouri Pacific — and this is probably true of many other railroads—had been allowed a return averaging at least 6 per cent on its investment from 1921 to 1930, it would have had a sufficient backlog of resources to have weathered the financial depression of the 30's and would probably never had been in bankruptcy," Mr. Neff will state in part.

"The railroad bankruptcies of the 30's, plus failure of many others to earn fixed charges which necessitated heavy borrowing, were certainly contributing factors to our long depression. . . . It is well to recall that in this same period, 1931-1940, when the country was approaching an unprecedented demand for railroad service, billions were poured out, not for additional railroad facilities, which were going to be needed desperately, but for highway and water facilities which, as it developed, we already had in abundance. . . . We have no recourse but to say to the commission that it has the economic power to either establish the railroads on a sound basis or to see them retrograde and become the spearhead of another depression which would be many times more severe than that of the 1930's."

Mr. Neff also will ask the commission to annul its order raising freight car per diem to $2, effective October 1. "Last year," Mr. Neff will continue, "we paid $1½ million in per diem which accrued largely because of free port time which should not be a railroad disability. We hope if the commission does not suspend this order, it will limit the free port time at ports to two days, the same as domestic traffic. This would add substantially to the car supply . . . and will relieve the railroads at the ports from a character of expense not assumed by railroads elsewhere."

Mr. Hackworth will offer testimony showing that the N. C. & St. L.'s net corporate income for the first six months of 1947 totaled $500,187; since December 31, 1946, its annual operating expenses have increased by $1,177,940; and the increased operating costs for fuel and taxes alone in the future will be at a rate of $1 million a year over the same costs for the first half of 1947. He also will relate that completion of an improvement program by the road, including the installation of signaling and the purchase of new passenger equipment and locomotives, will involve a total expenditure of $9,768,000.

Progress Requires Earnings

"Railroads are not backward, and if permitted to earn a fair return on their investment will provide the service the public demands," he will tell the commission. "As I see it, the railroads have served their sentence for wrongs . . . which they were accused of committing half a century ago. We now have different problems and a different set of men to handle them. . . . Once the railroads are crippled to the extent that they must become nationalized, other industries will surely follow in rapid succession."

According to Mr. Johnston, no dividends have been paid the I. C.'s 11,000 stockholders in the past 16 years. He will also testify that (1) the I. C.'s net railway operating income is estimated at $21 million for 1947 and $15 million for 1948, which, he will contend, is "substantially less" than the average amount the road should have; (2) its funded debt has been reduced from $383 million in 1927 to $235 million as of June 30; (3) unless the proposed increased rates are approved, necessary maintenance and other work on the road would have to be deferred; and (4) approval of the proposed rates would give the road an estimated net railway operating income of $34 million in 1948, which, he will assert, would be "no more than we need and to which we are entitled."

The commission will learn from Mr. Doss that the A. C. L.'s contemplated expenditures for additions to its rolling stock and signals will total $45,013,000. "Money must be obtained to make payment for this new equipment and signal installations," he will testify. "In addition, there is the urgent need for sufficient revenue to permit us to increase by several million dollars annually our expenditures for maintenance of way and structures. The principal and practically the only source from which we can look to obtain sufficiently increased revenues for such necessary purposes is in the rates assessed for handling freight."

Mr. Knight, asserting that increased revenues must be obtained if the railroads are to operate efficiently in the public interest and at the same time maintain a sound financial and credit position, will stress that the railroads have made and are continuing to make substantial purchases of new equipment required for the expeditious handling of their traffic.

He will tell the commission that the Seaboard will be able to convert into net railway operating income in 1947 only 7.64 cents of each dollar of revenues, compared with 16.75 cents for the five-year period ended December 31, 1930, and 14.12 cents for the 25-year period ended December 31, 1945. At the same time he will show that the investment in railroad property by the Seaboard increased from $194 million in 1921 to $348 million as of December 31, 1945.

Between Two Millstones

According to Mr. Wise, the railroads are being ground between the upper millstone of an upward spiral of both wages and materials, competition with trucks, buses and airplanes (much of which is of a subsidized nature), regulations that increase their cost of operation, taxes of one kind or another, and the nether millstone of prices received for their only commodity—transportation." "These prices," he will testify, "produce on the average much less revenue per unit of traffic than they were producing 25 years ago and railways are not free to make upward adjustments to meet increasing costs as are other classes of industry."

Mr. Wise will tell the commission that the C. of Ga.'s 1946 net income from operations was $54,585 short of the amount required to pay leased line rentals; was not enough to have paid the $453,000 interest accrued on securities; and failed to cover all fixed charges by $595,825.

"It seems obvious to me . . . that the Central is vitally in need of an increase in freight rates," he will continue, after noting that the estimated 1947 income available for fixed charges will be $514,964. "If it is to render efficient service . . . its increase in charges must be somewhat commensurate with its increased costs. Commercial and industrial concerns . . . have increased their charges from 33 per cent to as high as 200 per cent in the last few years, yet the Central and other railroads are receiving materially less per unit of service than they did 25 years ago. The railroads think that they are entitled by the great service that they have rendered, not only to live but to be allowed to progress, share some prosperity and earn such a rate of return on their property as has been recognized as adequate."

Competition Considered

Mr. Riggs plans to tell the commission that the chief traffic officers of the western carriers, in developing the proposal now before the commission, were "conscious of the necessity for maintaining, in so far as practicable, present relationships," and also were "fully cognizant of the growing competition which the railroads have with other types of competition." He will contend that the loss of traffic to other types of transportation which may result from the increased rates will not be "of such volume as to deprive the railroads of the benefit of a substantial increase in revenue."

Mr. Vivian, who will testify chiefly on the increased cost of protective service as indicated by the average cost of ice used in car bunkers, intends to show the commission that the increases now being sought by the carriers in protective service charges will produce revenue which will still remain "inadequate" to cover the cost of providing the service.

Evaluation of Motive Power

(*Continued from page 46*)

1—Locomotives of equivalent power and representing the latest state of the design art.

2—Equivalent through-line passenger schedules and freight operations and efficient use of potential availability.

3—Equivalent maintenance and servicing attention at all times.

4—Presently accumulated knowledge and experience.

5—The exclusion of fixed charges and maintenance expense for motive-power operating, servicing, and repair facilities. Where the use of steam may gradually decrease, some reduction in the facilities required therefor should take place, but as a partial offset to the resulting savings, moderately increasing investment is required in suitable facilities for other forms of motive power as their number becomes greater.

The ratings in Table VI for the gas- and steam-turbine locomotives are speculative and at the present stage are based on design characteristics and possibilities only. For the straight electric, Diesel, and reciprocating steam, the evaluations given are founded on substantial experience and may be considered independently of the others without alterations in the respective sequences of ratings given.

Table VI—Relative Evaluations of Various Motive-Power Types

Rating	Availability	Overall costs of ownership and use	Capacity for work	Performance efficiency: Overall performance	Performance efficiency: Thermal efficiency at drawbar
1st	Straight electric	Diesel-electric Reciprocating steam	Straight electric	Straight electric	Diesel-electric
2nd	Gas-turbine (est.)	Straight electric (see footnote, Table IV)	Gas-turbine (est.)	Gas-turbine (est.)	Straight electric
3rd	Diesel-electric	.....	Diesel-electric Steam-turbine (est.) Reciprocating steam	Diesel-electric	Gas-turbine (est.)
4th	Steam-turbine (est.)	.....	.....	Steam-turbine (est.)	Steam-turbine (est.)
5th	Reciprocating steam	.....	.....	Reciprocating steam	Reciprocating steam
Unrated	.....	Gas-turbine and steam-turbine*	.....	.....	.....

* Determination of this value must await actual construction, operation, and maintenance expense.

GENERAL NEWS

Conclude Testimony in Non-Op Wage Case

Faricy, four RR chiefs assail union demands as hearings near close at Chicago

William T. Faricy, president of the Association of American Railroads, and four railroad presidents were among the witnesses who appeared before the arbitration board this week at Chicago in opposition to the demands of the 17 non-operating unions for a 20-cents-an-hour wage increase. Mr. Faricy, appearing as the carriers' final witness, told the board that railroad employees "already have been the beneficiaries of a postwar governmental policy as to take-home pay far beyond what the policy intended."

Preceding the A. A. R. president in protest against the union demands were the following railroad heads: Ralph Budd, of the Chicago, Burlington & Quincy; P. J. Neff, of the Missouri Pacific; William White, of the Delaware, Lackawanna & Western; and J. B. Hill, of the Louisville & Nashville. Rebuttal in the wage dispute began on August 26, and it appeared likely that the case would close this week, with deliberations by the arbitration board beginning promptly thereafter.

Testifying on August 25, Mr. Faricy pointed out that last year's retroactive wage increases granted prior to rate relief were "softened" as to some railroads by the carry-back provision of the excess profits tax law. The railroads, he said, no longer have that carry-back, and "if there is to be any wage increase before a corresponding and compensatory rate increase can be made effective, the railroad treasuries will have to stand the cost. They are in no shape to do it."

Declaring that the non-operating employees "have been very well treated and are ahead of the game right now in their wage scales," Mr. Faricy pointed out that these employees enjoy a greater "take-home" pay than production workers in manufacturing industries. Using government figures as his authority, he said that in 1944 production workers, on the average, were making $46.08 per week, while the railroads' non-operating employees were paid $45.49 per week. By April, 1947, the latter group was averaging $52.49 and workers in manufacturing industries, as of June, 1947, were earning $48.91.

"On the basis of these figures, we find that since 1944 workers in manufacturing industries have gone up $2.83 per week, while in the same period non-operating railroad employees have gone up $7 per week. . . . These figures demonstrate that a postwar wage policy originally designed to cushion the shock of loss of take-home pay made these non-operating railroad employees the beneficiaries of that policy even though they never were threatened with loss of take-home pay, as were the workers in manufacturing industries."

Mr. Budd, declaring that wage increases and other costs are "far outdistancing" gains in the productivity of the railroads, said that since the beginning of the war productivity measured in terms of traffic units handled has dropped 23.6 per cent per dollar of wages paid. "A further increase in railroad wages," he concluded, "would be harmful to the industry, to its employees and to the public."

Expressing concern over the ability of the railroads to continue their extensive replacement and betterment program in the face of increased wage costs, the Burlington's president pointed out that the rehabilitation program carried out after World War I made possible the kind of railroad service which helped win World War II. Measured in terms of its importance to the country in time of peace and for national defense, the cost of keeping America's railroad network up to date is small compared with the total national debt, Mr. Budd declared. "It is cheap compared with the cost of not having the best railroad service at all times," he added.

Mr. Neff said that a 20 cent hourly wage

(*Continued on page 55*)

A. A. R. Increases Per Diem from $1.25 to $1.50

An increase in freight car per diem from $1.25 to $1.50, effective September 1, was announced August 22 by the Association of American Railroads. As noted in *Railway Age* of August 2, page 57, the increase to $1.50 was recommended by the A. A. R.'s board of directors at its July meeting. However, it still falls short of the per diem rate of $2 prescribed by the Interstate Commerce Commission to become effective for a six-months' period, starting October 1. The commission's order, which excludes tank and refrigerator cars, was outlined in *Railway Age* of August 9, page 69.

The A. A. R. said that the increase to $1.50 was approved by vote of the majority of railroads, based on their ownership of freight cars. At the same time, it noted that the September 1 increase is the second in three months, the per diem having been raised from $1.15 to $1.25 on June 1.

Sees Few Cars Freed by Faster Freights

Car Service Division's study shows 3,785 cars "saved" by 30% speed-up

Studies conducted by the Car Service Division of the Association of American Railroads show that an increase of 5 m.p.h., or 30 per cent, in average freight train speed for all Class I roads—an "admittedly impractical" move—would save only 2.8 per cent in the average time required to handle a load of freight, it is reported by W. C. Kendall, chairman of the division, in his latest monthly review of the "National Transportation Situation." "The car-days thus saved would be sufficent on the basis of present turn-around time to handle only 3,785 additional loads per calendar day, which is 16.1 per cent of the current daily freight car shortage," he said.

Mr. Kendall explained that the study was conducted because of the interest of the C.S.D. in calculating the extent to which an increase in freight train speeds could relieve the present car shortage. As noted in *Railway Age* of August 16, page 70, and August 23, page 55, Robert R. Young, chairman of the Chesapeake & Ohio, has asserted that there has been a "deliberate slowdown" of freight trains in the West, a condition which, he said, has resulted in an inadequate car supply and great quantities of food going to waste. Mr. Young's allegations have been vigorously disputed by William T. Faricy, president of the A.A.R.

Still a Shortage—In his discussion of closed cars, Mr. Kendall observed that demands for all classes of box cars continue "extremely heavy," adding that "there is no prospect that the requirements will ease at least until the fall peak loading period has been passed."

"Although harvesting of the grain crop in the Southwest is virtually completed, demands continue heavy in that territory for cars to load grain now in open storage," he continued. "This, together with the advent of heavy grain loading in the Northwest and East Central regions as well as increasing requests for box cars to load other commodities in the Northwest and East Central regions as well as increasing requests for box cars to load other commodities in all sections of the country, necessitates continuation of close cooperation between shippers, receivers and railroads in prompt release and handling of cars so that requirements will continue to be met to the maximum extent possible."

Mr. Kendall said that the handling of the record wheat crop in the Southwest —during June and July there were 195,073 cars of bulk grain loaded, an increase of 41.5 per cent over the corresponding 1946 period—was aided materially by the co-operation of the grain trade in maintaining office forces on Sundays and holidays in terminals for processing grain samples and grades received from state inspection agencies. Adding that such action resulted in substantially reducing the large bank of cars on hold tracks on weekends and stepped up the loading at mills and elevators, he noted that grain interests in the Northwest and East Central territories have also agreed to give "serious consideration" to adopting a similar plan prior to the peak loading in their districts.

All Records Broken—"There was a total of 11,741,473 box cars loaded on all roads during the first 32 weeks of this year, an increase of 33,207 or 0.3 per cent above the corresponding period in 1946," Mr. Kendall said. "Grain and grain products loaded during the first 32 weeks... totaled 1,699,800 cars. This breaks all records for grain and grain products loading and is 193,169 cars or 12.8 per cent higher than the number loaded during the same period last year. The total ownership of serviceable box cars as of July 15 was 694,998, a decrease of 4,275 cars as compared with July 15, 1946."

With respect to other types of closed car equipment, the C.S.D. chairman reported that the supply of ventilated box cars is "more than adequate" to transport the balance of the watermelon production in the Southeast; although the supply of stock cars is "very tight," and although there is little doubt that the supply will be stringent during the peak of the movement off western ranges, it is anticipated that requirements will be satisfactorily met provided marketing of stock does not entail long hauls beyond the normal marketing centers; and the supply of automobile cars has been sufficient to meet the requirements of the industry for the loading of set up vehicles and parts. He added that auto cars currently are being used for miscellaneous loading to the maximum extent practicable in order to bolster the supply of box cars for general use.

Turning to the supply of hopper cars, Mr. Kendall observed that "unless something unforeseen occurs, there is still a possibility the revenue coal loadings for the year 1947 will equal, or slightly exceed, that of 1944." "Coal production since the miners returned to work after vacation has not been quite as high as prevailed prior to the work suspension," he said. "This is not, however, entirely due to car shortage because as many cars were reported short when revenue coal loading was in excess of 190,000 carloads per week as now when it ranges around 180,000 weekly."

Mr. Kendall reported that (1) lake coal dumpings at lower lake ports in July and the first 12 days of August decreased by 64,181 cars under the corresponding 1946 period; (2) the lake ore movement is "progressing satisfactorily, and the rail movement of ore to head-of-the-lakes ports shows a "substantial increase" over 1946; and (3) although exports of coal overseas fell off considerably in July—the present goal for overseas exports is set at 5 million tons monthly—dumpings up to August 12 indicate the possibility of better than 4,750,000 tons for the month, which, he said, will be a new record.

Open-Top Situation — After noting that there also are heavy demands for gondolas, flat cars and covered hoppers, Mr. Kendall said that "there are no indications of any recession in loadings requiring open top cars, but . . . every prospect for still heavier demands." Observing further that shippers, consignees and railroads have a joint interest in maintaining a satisfactory car supply, he said that this can only be accomplished by "continual vigilance to prevent any unavoidable delay to equipment, either in loading, unloading or movement."

With respect to refrigerator cars, the C.S.D. chairman said that although the car supply nationally has been satisfactory during the past month except for some spot shortages in California and Arizona, it is becoming tighter principally due to the cool weather and rains causing some of the crops to mature later than usual. At the same time, he reported that there have been decreases, as compared with 1946, in fresh fruit and vegetable loadings, total refrigerator car loadings and total perishable loadings.

The review also disclosed that (1) as of August 8, the number of cars of export freight at hand on all ports totaled 9,623, or a bank of export freight of approximately 3.7 days; (2) as of August 1, there were 1,651,452 serviceable and 80,826 bad order freight cars; (3) as of August 15, 767 embargoes had been placed, including 381 by the C.S.D., as compared with 788 on the same date last year; (4) the average turn-around time in July was 14.21 days, as compared with 13.20 days in June; and (5) the average detention of freight cars over the free time during July was 15.63 per cent, as compared with 15.48 per cent in June and 17.24 per cent for July, 1946.

Roadmasters, B. & B. Men Meet at Chicago, September 16-18

The annual conventions of the Roadmasters' and Maintenance of Way Association and the American Railway Bridge & Building Association will be held concurrently at the Hotel Stevens, Chicago, September 16 to 18, inclusive. While the meetings will be entirely separate from each other, the two groups will be brought together at different times during the three-day period to participate in joint sessions or other events of common interest to the members of the two associations.

The first joint affair will be the opening session on Tuesday, September 16, to be called to order at 10:00 a. m. (Chicago daylight saving time). At this session the opening address will be presented by J. H. Aydelott, vice-president, Operations and Maintenance department of the Association of American Railroads. The second joint session will be held on Wednesday afternoon when the combined groups will be addressed by Ralph Budd, president of the Burlington Lines, who will speak on Problems of Railway Management and How Our Groups Can Help. The program of this joint session will also include the showing of two motion pictures, one dealing with the employee suggestion system of the Illinois Central, while the other, entitled Maintenance of Way Mishaps, will be shown through the courtesy of the Southern Pacific.

Wednesday evening those in attendance at both meetings will participate in the joint annual banquet, to be held in the grand ballroom of the hotel. The final joint event will take place on Thursday afternoon and will consist of an inspection trip through the steel mill of the United States Steel Corporation at Gary, Ind. Members of the groups will be transported to that point by buses that will leave the hotel at 1:10 p. m.

The program of the roadmasters' meeting is as follows:

Tuesday, September 16

11:00 a.m.—Address by President E. J. Brown.
11:20 a.m.—Report of Committee on Installation and Maintenance of High-Speed Turnouts, R. E. Meyer, chairman (roadmaster, C. & N. W., Sterling, Ill.).
2:00 p.m.—Election of honorary members.
2:10 p.m.—Report of Committee on Methods of Increasing the Production of Extra Gangs, R. G. Simmons, chairman (gen. trk. insp., C. M. St. P. & P., Chicago).
2:40 p.m.—Address on The Need for Increased Efficiency and Economy in Maintenance of Way Operations and Practices, by S. R. Hursh, asst. ch. engr., maint., Pennsylvania.
3:10 p.m.—Address on Prolonging the Life of Crossties, by C. A. Rishell, director of research, National Association of Lumber Manufacturers.
3:40 p.m.—Adjournment to Exhibit.

Wednesday, September 17

9:30 a.m.—Report of Committee on Development and Training of Track Foremen, Chas. Weiss, chairman (supvr., Pennsylvania, Valparaiso, Ind.).
10:20 a.m.—Address on Roadbed and Embankment Stabilization, by R. B. Peck, research professor of soil mechanics, University of Illinois.
11:10 a.m.—Report of Committee on Safety in Operation of Motor Cars and Work Equipment, J. E. Griffith, chairman (asst. ch. engr. m. w. & s., Southern, Knoxville, Tenn.).
3:30 p.m.—Report of Committee on Advance Preparation of Track for Rail Renewals, R. W. Putnam, chairman (asst. engr. m. w. & s., S. P., San Francisco, Cal.).
4:15 p.m.—Adjournment to Exhibit.

Thursday, September 18

9:30 a.m.—Report of Committee on Roadmaster's Responsibility in Controlling Maintenance of Way Costs, J. E. Gault, chairman (asst. ch. engr., C. I. & L., LaFayette, Ind.).
10:15 a.m.—Motion Picture on Safety in Maintenance of Way Operation (courtesy Denver & Rio Grande Western).
11:00 a.m.—Business Session.

Election of Officers.

The B. & B. Association will meet as follows:

Tuesday, September 16

11:00 a.m.—Address by President F. G. Campbell.
11:20 a.m.—Report of Committee on Development and Training of Supervisory Personnel in Bridge, Building and Water Service Forces, F. W. Hutcheson, chairman (supvr. b. & b., C. & O., Newport News, Va.).
2:00 p.m.—Award of honorary membership.
2:10 p.m.—Report of Committee on Inspection of Substructures and Underwater Foundations, L. D. Garis, chairman (gen. bldg. insp., C. & N. W., Chicago).

The "Hoosier," new Diesel-powered, streamlined train of the Chicago, Indianapolis & Louisville, was christened by John T. McCutcheon, well-known cartoonist, at Chicago on August 17 prior to its maiden run to Indianapolis, Ind.

* * *

2:45 p.m.—Address by E. J. Ruble, structural engineer, Research Staff, A. A. R., on Recent Tests on Determination of Impact and Stresses in Steel Masonry and Timber Bridges.
3:15 p.m.—Report of Committee on Glued, Laminated Members in Bridges, Lee Mayfield, chairman (res. engr., M. P. Lines, Houston, Tex.).
3:45 p.m.—Adjournment to Exhibit.

Wednesday, September 17

9:30 a.m.—Report of Committee on Construction and Maintenance of Shop and Enginehouse Floors and Runways, R. W. Gilmore, chairman (gen. br. insp., B. & O., Cincinnati, Ohio).
10:20 a.m.—Report of Committee on Utilization of New Types of Materials in Buildings, B. M. Stephens, chairman (arch. engr., T. & N. O., Houston, Tex.).
11:10 a.m.—Address by George D. Gaw, director, Color Research Institute of America, on The Power of Color.
3:30 p.m.—Report of Committee on the Economies Which Can Be Derived Through the Modernization of Obsolete Water Stations, H. E. Graham, chairman (asst. supt. w. s., I. C., Chicago).
4:15 p.m.—Adjournment to Exhibit.

Thursday, September 18

9:30 a.m.—Report of Committee on Safety Measures to Protect Employees Within Buildings Against Fire and Accident, S. L. Chapin, chairman (safety supvr., S. P., San Francisco, Cal.).
10:15 a.m.—Report of Committee on Unfilled Needs in Power Tools for Bridge and Building Work, R. W. Johnson, chairman (asst. engr., C. M. St. P. & P., Chicago).
11:00 a.m.—Business Session.
Election of Officers.

Equipment on Order

Class I railroads and private car lines had 118,117 new freight cars on order on August 1, as compared with 109,117 on July 1, according to the Association of American Railroads. Of the former total, Class I roads and railroad-owned privately-controlled refrigerator companies had 102,998 new freight cars on order, compared with 102,634 on July 1 and 49,078 on August 1, 1946.

Cars on order by Class I roads on August 1 included 40,386 hopper cars, of which 2,836 were covered hoppers; 6,355 gondolas, 1,093 flat, 9,016 refrigerator, 50 stock, 282 miscellaneous freight cars and 45,816 box cars, including 42,035 plain and ventilated and 3,781 automobile box cars. Of the total number of new freight cars which Class I roads had on order on August 1, 23,654 will be built in railroad shops and 78,344 in outside shops.

The Class I roads also had 815 locomotives on order on August 1, compared with 604 on the same day in 1946. The former total included 29 steam, four electric and 782 Diesel-electric locomotives, compared with 76 steam, six electric and 522 Diesel-electrics a year ago.

Class I roads installed 26,174 new freight cars in service in the first seven months of 1947, of which 5,439 were installed in July. New freight cars put in service in the first seven months of 1946 totaled 21,568. Those installed in the 1947 period included 6,961 hopper cars, of which 1,009 were covered hoppers; 2,252 gondolas, 1,985 refrigerator, 454 flat, 500 stock, 137 miscellaneous freight cars and 13,885 box cars, including 11,376 plain and ventilated and 2,509 automobile box cars.

The class I roads also put 482 new locomotives in service in the first seven months of 1947, of which 63 were steam, two electric and 417 Diesel-electric. New locomotives installed in the same period last year totaled 233, of which 66 were steam and 167 were Diesel-electric.

The Class I roads retired 32,191 freight cars in 1947, of which number 6,273 were retired in July. As of August 1, 1946, 33,047 were retired.

C.P.R. Converting Island Line to Diesel Power

Plans for the complete conversion to Diesel-electric power of the Esquimault & Nanaimo on Vancouver Island have been announced by W. M. Neal, chairman and president of the Canadian Pacific, owner of the E. & N. The change from steam to Diesel-electric motive power will be made during 1948, the announcement said. Mr. Neal made this announcement while visiting Victoria, B. C., with a party of company directors on an inspection tour of the C. P. R.'s western lines.

Plan Large Joint Exhibit

So well did the plan work last year that the Track Supply Association and the Bridge and Building Supply Men's Association are again arranging an extensive joint exhibit of equipment and materials in conjunction wth the concurrent annual conventions of the Roadmasters' Association and the American Railway Bridge and Building Association. These conventions will be held at the Stevens Hotel, Chicago, September 16 to 18, inclusive, and the products display will be in the hotel's exhibit hall during the same period, except that it will open at noon on September 15.

Already 93 companies have arranged to occupy 154 booths in the exhibit hall, with only a few booths remaining that have not been committed. Thus the exhibit will exceed even the record display held last year when 90 companies were represented. Companies that have arranged to participate in this year's exhibit are as follows:

Achuff Railway Supply Company
Air Reduction Sales Company
American Brake Shoe Company, Ramapo Ajax Division
American Fork & Hoe Co.
American Lumber & Treating Co.
Armco Drainage & Metal Products, Inc.
Austin-Western Company
Barco Manufacturing Company
Bernuth Lembcke Company
The Buda Company
Caterpillar Tractor Company
Chicago Pneumatic Tool Company
Chipman Chemical Company
City Sales Company
Conley Frog & Switch Co.
Crerar, Adams & Co.
Cullen-Friestedt Company
Dearborn Chemical Company
Drinkwater, Inc.
The Duff-Norton Manufacturing Company

Electric Tamper & Equipment Co.
Fairbanks, Morse & Co.
Fairmont Railway Motors, Inc.
Gravely Ia-Nois, Inc.
Hastings Signal & Equipment Co.
Hayes Track Appliance Company
Homelite Corporation
Hose Accessories Company
Hubbard & Co. (Unit Rail Anchor Company)
Illinois Malleable Iron Company, Railroad Division
Independent Pneumatic Tool Company
Ingersoll-Rand Company
Jaeger Machine Company
Johns-Manville
O. F. Jordan Company
The Joyce-Cridland Company
Kalamazoo Manufacturing Company
The Kershaw Company
Koehring Company
The Lehon Company
LeRoi Company
R. G. LeTourneau, Inc.
Lima Locomotive Works
Link-Belt Speeder Corporation
Littleford Bros., Inc.
The Lundie Engineering Corporation
Mack Welding Company
Maintenance Equipment Company
Mall Tool Company
Marvel Equipment Company
Massey Concrete Products Company
The Master Builders Company
Modern Railroads Publishing Company
Morden Frog & Crossing Works
Morrison Metalweld Process, Inc.
Murdock Manufacturing & Supply Co.
Nordberg Manufacturing Company
Northwestern Motor Company
Oliver Iron & Steel Corp.
Overhead Door Corporation
Owens-Illinois Glass Company
The Oxweld Railroad Service Company
The P. & M. Co.
Pettibone Mulliken Corporation
Pittsburgh Pipe Cleaner Company
Pocket List of Railroad Officials
Power Ballaster Company, Division of Pullman-Standard Car Manufacturing Company
The Q & C Co.
Racine Tool & Machine Co.
The Rail Joint Company
Railroad Equipment
Railroad Products Company
The Rails Company
Railway Age
Railway Purchases and Stores
Railway Track-Work Company
Reade Manufacturing Company; Harrop Chemical Company
Roseman Tractor Mower Company
Rust-Oleum Corporation
Schramm, Inc.
Sherburne Company
Sperry Rail Service
Taylor-Colquitt Company
Teleweld, Inc.
Templeton, Kenly & Co.
Thornley Railway Machine Company
Timber Engineering Company
The Union Metal Manufacturing Company
United Laboratories, Inc.
The Warner & Swasey Co., Gradall Division
Warren Tool Corporation
Woodings-Verona Tool Works; Woodings Forge & Tool Co.
Woolery Machine Company

Rio Grande Operating Unit Absorbs Moffat Division

The Moffat division of the Denver & Rio Grande Western, constituting the territory embraced by the Denver & Salt Lake before its merger with the Rio Grande, was consolidated with the Pueblo division, August 16. Headquarters of the expanded Pueblo division will be moved from Pueblo, Colo., to Denver.

New Freight Airplane Offered by Curtiss-Wright

The Curtiss-Wright Corporation is displaying at its Columbus, Ohio, plant a "mock-up" of a new airplane designed to carry nearly every type of shipment now moved by railroads. Able to accommodate single units of cargo up to 48 ft. long, 9 ft. wide, 7 ft. high and weighing as much as 32,000 lb., the new airplane—designated as the CW-32—can be flown overnight from New York to San Francisco, Cal., at a direct flying cost of $112 for each ton of cargo, according to Curtiss-Wright engineers. This represents an operating cost of approximately 4 cents a ton-mile.

Powered by four engines totaling 8,400 hp., the proposed airplane's dimensions are described as "nearly twice those of a railroad freight car." An overall length of 89 ft. gives it a cargo hold 61 ft. long and a 4.800 cu. ft. capacity. An airplane of the design being used in the demonstration could be built in 12 months from the time orders justify its production, it was predicted.

Ralph Luddecke Retires

Ralph R. Luddecke, a former president of the National Industrial Traffic League and director of traffic of Standard Brands, has retired from active duty with this company after 40 years' service. His home address is 187 Gates avenue, Montclair, N. J.

River Transport for Trailers

Arrangements have been practically completed for the transportation in river vessels (converted LST's) of truck trailers between New York and Albany, N. Y. Plans call for overnight service in each direction. Trailers can be loaded to capacity, without regard to highway weight restrictions, and placed on and removed from the two-deck vessels by special tractors. Savings in fuel, insurance, wear and tear and drivers' wages are expected to make the service attractive to truckers. It is reported that the installation of comparable service between other coastal points is under consideration.

Conclude Testimony in Non-op Wage Case

(*Continued from page 52*)

increase would "necessarily seriously cripple the industry," and that such an increase, if made retroactive, would be "disastrous." Using the M. P. as an example, Mr. Neff said the road has been in bankruptcy since 1933, and is presently in default of interest totaling $208,149,517 and matured bonds in the principal amount of $11,072,100. The railroad, he asserted, "does not have in prospect any funds from prospective business, past earnings, present volume of business, from surplus, or from other sources with which to pay any increase in wages."

The M. P.'s chief executive officer said that 10 per cent of the country's economy is represented by the railroad industry and those depending on it. Therefore, a wage increase, followed by a rate increase, would have a greater inflationary impact upon the country's economy than a like wage increase in any other industry, he stated.

Mr. Neff testified at length on the drop in employee productivity on the M. P., asserting that 1946 costs as compared with 1941 increased 43 per cent per car handled in yards, 109 per cent on merchandise handled in freight houses, 115 per cent per steam locomotive given extended classified repairs and 109 per cent per unit of track for ordinary maintenance work. If the production basis in 1946 had been the same as 1941, the M. P. would have saved approximately $6,000,000, Mr. Neff told the board.

Previous testimony on behalf of the carriers was substantiated in every respect by Mr. Hill and Mr. White. The latter proposed that any wage increase be made effective only when the railroads are able to secure additional revenues under authorization of the Interstate Commerce Commission. He expressed the opinion that a wage increase would put the railroads in such a financial condition as to lead them to government ownership and operation, "despite the lack of popular demand for it."

Mr. Hill predicted insolvency for many railroads if the wage increase was granted without a corresponding rate increase. Such a situation, he asserted, "would be fatal to the earning power of railroads in general and to the service which the public would expect. It also would be detrimental to railroad employees because of the inability of their industry to give that quality of service which would attract patronage and maintain employment."

Appearing before the board on August 23, L. W. Horning, vice-president of the New York Central, pointed out advantages now afforded railroad employees: (1) income "near the top" in American industry; (2) a liberal retirement system; (3) universal application of a highly developed seniority system; and (4) free transportation for themselves and their dependents. That railroad employment is attractive, he said, is illustrated by a recent four-week period when 141,072 persons applied for 71,810 available positions on Class I railroads.

On August 21, Dr. J. H. Parmelee, vice-president of the A. A. R., produced figures to illustrate his contention that railroad employees have fared far better than railroad investors since 1929. From the latter date to 1946, the employees' average earnings gained 76 per cent while the investors' return dropped 47.5 per cent, he stated. The wage demands, if granted, "would have exactly the same effect as would more than doubling the present total funded debt of the railroads," Dr. Parmelee told the board.

During the final day of carrier testimony, F. K. Mitchell, general superintendent of motive power and rolling stock, New York Central, said that the increased output per man-hour in the railroad mechanical department is not a result of greater employee efficiency. Instead, he testified, it has been brought about through management's study of production needs, and by furnishing tools and machinery capable of increasing production without increasing the work load per man or the physical effort or skill required of the employees.

Pullman-Standard Reports $257 Million in Unfilled Orders

The unfilled order backlog of the Pullman-Standard Car Manufacturing Company stood at $257,000,000 on August 1, David A. Crawford, president, reported last week in a quarterly statement to stockholders. Production in the first half of 1947 more than doubled in dollar value

the output during the first six months of 1946, he stated. Shortages and unbalance in the supply of rolled steel and other component parts during the period, particularly in the first quarter, prevented the company from producing the number of cars scheduled, however.

Freight car construction increased materially during June and July, but production at the rate originally scheduled was not reached because of absenteeism and the shortage of skilled workmen, it was stated. Contingent upon an adequate supply of steel and other parts, the report said, Pullman-Standard "will produce its full share in the freight car program set up by industry and government officials."

Car Wheel Unbalance Incorrectly Stated

In a feature article describing the General Motors "Train of Tomorrow" in the July 26 *Railway Age*, the amount of metal removed by hand grinding in order to balance the car wheels dynamically on a Bear machine was incorrectly stated to vary from 1 to 15½ ounces per wheel. These figures should have been 2 ounces to 3 lb. per wheel. As a matter of fact, 18 pairs of wheels were dynamically balanced on the Bear machine for use on the "Train of Tomorrow" cars, a total of 35.9 lb. of metal being removed by hand grinding from indicated points on the underside of the rims to bring the wheels into accurate dynamic balance. This is an average of about 2 lb. per pair of wheels.

W.A.A. Advances O. W. Bender

Otto W. Bender has been appointed director of the traffic division of the War Assets Administration, succeeding G. C. Devol. Mr. Bender was deputy director of the division, and is succeeded in that post by Lewis Marks.

Tie Producers' Meeting

The twenty-ninth annual convention of the Railway Tie Association will be held at the Arlington Hotel, Hot Springs, Ark., September 23-25, inclusive. On the program will be many committee reports and addresses on technical subjects of direct and indirect interest to railway men. Features of the meeting will be an address on Tuesday afternoon, September 23, by C. E. Johnston, chairman of the Western Association of Railway Executives, and an address at the annual luncheon on Wednesday by Paul J. Neff, chief executive officer of the Missouri Pacific. The detailed program follows:

Tuesday, September 23

Opening business
Address—Needs of the Railroads for Crossties in the Next 12 Months, by C. Miles Burpee, vice-president, Simmons-Boardman Publishing Corporation, New York
Report of the Committee on Checking and Splitting of Crossties
Address—The Railroads' Economic Outlook for the Next 12 Months, by C. E. Johnston, chairman, Western Association of Railway Executives, Chicago
Report of Committee on Mechanical Handling of Crossties
Address—Trend of Production of Crossties, by T. J. Turley, Jr., Bond Brothers Company, Louisville, Ky.
Report of the Manufacturing Practice Committee
Annual Dinner, Preceded by Reception, 7:00 p. m.

Wednesday, September 24

Address with Motion Picture—A Wyoming Tie Drive, by R. Van Metre, Wyoming Tie & Timber Co., Chicago
Report of Committee on Timber Conservation
Address—What the Railroad Foresters Are Doing, by James Spiers, forester, Central of Georgia, Savannah, Ga.
Report of Committee on Concentration Yards
Address—The Export Outlook for Crossties, by Joseph L. Muller, acting chief, Forest Products Division, Office of International Trade, U. S. Department of Commerce, Washington, D. C.
Address—Research on Wood for Railroad Use, by Dr. Reavis C. Sproull, Southern Research Institute, Birmingham, Ala.
Annual Luncheon—Address by Paul J. Neff, chief executive officer of the Missouri Pacific, St. Louis, Mo., 1:00 p. m.

Thursday, September 25

Report of the Committee on Specifications
Address—Timber Resources of the United States and What They Mean in Crossties, by Edward C. Crafts, chief, division of Forest Economics, Forest Service, U. S. Department of Agriculture, Washington, D. C.
Address—The Future Timber Supply, by C. D. Turley, engineer, ties and treatment, Illinois Central, Chicago
Address—Factors That Enter into the Cost of a Crosstie, by B. N. Johnson, Wood Preserving Division, Koppers Company, Richmond, Ind.

Freight Car Loadings

Loadings of revenue freight for the week ended August 23 totaled 900,895 cars, the Association of American Railroads announced on August 28. This was a decrease of 5,410 cars, or 0.6 per cent, below the previous week, an increase of 15,940 cars, or 1.8 per cent, above the corresponding week last year, and an increase of 47,469 cars, or 5.6 per cent, above the comparable 1945 week.

Loadings of revenue freight for the week ended August 16 totaled 906,305 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

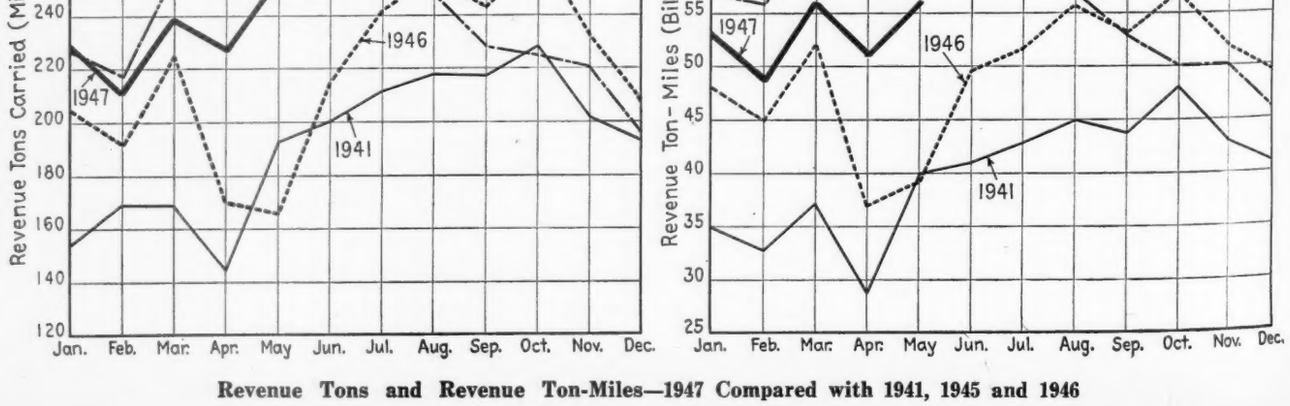
Revenue Freight Car Loading

For the Week Ended Saturday, August 16

District	1947	1946	1945
Eastern	157,847	161,318	109,899
Allegheny	187,456	190,209	131,675
Pocahontas	73,540	73,288	36,974
Southern	128,087	131,147	97,899
Northwestern	146,405	134,910	110,953
Central Western	144,028	132,925	107,804
Southwestern	68,942	63,756	57,628
Total Western Districts	359,375	331,591	276,385
Total All Roads	906,305	887,553	652,832
Commodities:			
Grain and grain products	63,020	50,309	53,897
Livestock	11,722	15,735	14,184
Coal	174,541	181,006	90,003
Coke	13,918	13,635	11,547
Forest products	48,496	51,612	37,416
Ore	82,752	73,701	62,917
Merchandise l.c.l.	115,260	119,616	90,516
Miscellaneous	396,596	381,939	292,352
August 16	906,305	887,553	652,832
August 9	905,244	899,086	870,002
August 2	921,591	898,391	863,910
July 26	919,928	910,513	886,430
July 19	919,734	921,496	882,648
Cumulative total, 33 weeks	27,679,527	25,107,758	27,044,574

In Canada.—Car loadings for the week ended August 16 totaled 73,728 cars as compared with 72,662 cars for the previous week and 70,863 cars for the corresponding week last year according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
August 16, 1947	73,728	35,417
August 17, 1946	70,863	34,615
Cumulative totals for Canada:		
August 16, 1947	2,401,242	1,206,600
August 17, 1946	2,209,999	1,119,229



Revenue Tons and Revenue Ton-Miles—1947 Compared with 1941, 1945 and 1946

With the Government Agencies

Wharfage Case Again Lost by Army

I. C. C. still upholds railroads in dispute over allowance and reparations

Reporting on reargument in the No. 29117 proceeding, the Interstate Commerce Commission has affirmed its prior report's ruling that the railroads' refusal to make an allowance for wharfage and handling services performed by the Army with respect to shipments moving over its piers in Norfolk, Va., or to furnish the services themselves, was not an unjust and unreasonable practice resulting in unjust discrimination in violation of the Interstate Commerce Act. The report on reargument was dated July 25 but made public only last week; it was a 6-to-5 decision in which Commissioner Johnson, director of the Office of Defense Transportation, participated.

However, Commissioner Johnson's vote was not required to break a tie, for he was among the dissenters, subscribing to the dissenting opinion filed by Commissioner Splawn. Another dissenting expression came from Commissioner Alldredge, with whom Chairman Aitchison agreed, while the dissent of Commissioner Rogers was merely noted. As reported in the *Railway Age* of June 8, 1946, page 1153, the commission's prior report, which the present decision affirms, had reversed a still earlier report wherein Division 4 had found in favor of the Army (see *Railway Age* of August 25, 1945, page 348).

Origin of the Case—The controversy arose on June 15, 1942, when the Army took over certain Norfolk piers formerly operated by the Transport Trading & Terminal Corp., a public wharfinger whose charges were absorbed by the railroads. When the Army took over the carriers refused to continue previous allowances and absorptions of four cents per 100 lb., the refusal having been based on the applicable tariffs which restricted the holding-out to load and unload carload export freight to that moving over so-called public piers, i.e., piers operated by railroads, steamship companies, or public wharfingers. During the reargument the commission was advised that efforts were being made to have the Army piers operated in a manner similar to that in effect prior to June 15, 1942; so, as the majority report put it, "the purpose of this proceeding now is for reparations only."

Meanwhile, the majority had asserted that "it is neither the legal duty of the railroads to provide piers, which are essentially steamship facilities, nor to unload carload freight except in unusual circumstances . . ."; and in such circumstances the duty "is established by tariff undertaking." The Army contended that there were provisions in published tariffs offering the handling services it demanded, but the commission rejected that contention, finding that to sustain it would require a reading into the cited tariffs of "words which were not there."

Precedents Cited—The report, like its predecessor, went on to refer to commission decisions in the terminal services cases (Ex Parte 104—Part II) where there was evolved the principle to the effect that where a carrier is prevented from performing a service by the election of an industry to perform it, the carrier's duty under the line-haul rates ends at a convenient point of interchange; and there is no obligation resting upon it to make an allowance to the industry performing its own spotting service. "Activities on the piers during the war were at a maximum, and there is no doubt that under the arrangement which became effective July 15, 1942, the defendants would not have been able to continue the work done formerly by the Transport Trading & Terminal Corp. at their convenience and to the satisfaction of the complainant," the report said.

The commission expressed its belief that the Ex Parte 104 precedent "may well be applied here," despite the Army's contention that the principle was not applicable because "a different factual situation exists." After the Army took over the piers from the public wharfinger, the report added, the railroads' duty was "to place properly the complainant's cars for loading and unloading, and in the circumstances they discharged that obligation when they placed the cars in complainant's storage yard adjacent to the piers."

With respect to the allegation of unjust discrimination against Army traffic, the commission said that the freight of other shippers at Norfolk, which receives unloading service, "is not the like kind of traffic contemplated by section 2 of the act dealing with unjust discrimination." Moreover, if the freight of commercial shippers were handled in the same manner as the Army freight," the export rates would not apply, much less the accessorial service demanded by the complainant or an allowance therefor." In this connection, the report had noted that the railroads amended their tariffs to qualify the Army freight for export rates which had previously been restricted to traffic "which does not leave the possession of the inland carrier until delivered to the ocean operator or its agent."

Rates Below Maxima—Finally, the majority rejected a contention to the effect that the export rates contemplated railroad performance of the handling services, and thus brought "unust enrichment" to the carriers when they were not required

(*Continued on page 59*)

Rate Rise Proposed by Pullman Company

Suggested increases to yield $13,000,000 in additional annual revenues

Seeking to make its sleeping-car service more nearly self-supporting on the present "low-earning and deficit lines" and to secure a "moderate net return" on its operations as a whole, the Pullman Company this week filed a petition with the Interstate Commerce Commission in which it proposes rate increases ranging from 1 to 48.9 per cent. The estimated yield would be $13,000,000 in additional annual revenues. The increases would apply to sleeping-car accommodations only; no change is proposed in present rates for accommodations in parlor cars.

Specifically, Pullman, the capital stock of which has been acquired by 57 railroads on whose lines more than 95 per cent of the nation's sleeping car service is operated, seeks authority to:

1. Increase to a minimum of $3.50 the standard lower berth rate to take the place of the present standard lower berth rates of $2.35, $2.65 and $2.95. The petitioner said that this change would still leave those rates less than the full cost of service.

2. Increase the standard lower berth rates above $2.95, i.e., between $3.20 and $17.35 inclusive, by gradually reducing percentages. No change is proposed in rates for any type of accommodation where the lower berth rate exceeds $17.35. Pullman said that there has been an increase in the cost of furnishing these services, but on the longer sleeping car lines, where in excess of $17.35 rates apply, the revenue from present rates "generally exceeds" expenses.

3. Increase rates for upper berths and all types of room accommodations by the same percentages as applied to the lower berth rates on which the upper berth and room rates are based.

4. Increase from $62.40 per day to $80 per day, with a minimum charge for three days, charter car per diem charges in standard sleeping cars. A proportionate increase in charges for periods over 30 days and for private car operations also would apply.

5. Increase scale charges for the exclusive use of standard cars for one-way trips by the same percentages as applied to the lower berth rates on which the scale charges are made.

6. Increase tourist sleeping car berth rates in proportion to the proposed increases in standard car berth rates so that the present relationship of two-thirds of a standard car berth rate for a tourist car berth will continue.

7. Increase from $41.80 per day to $54 per day, with a minimum charge for three days, charter car per diem charges in tourist cars.

Pullman said that its gross revenues from the sale of accommodations and charter of cars has declined from a wartime peak of $158,000,000 in 1944 to $127,000,000 in 1946 and an estimated $107,000,000 in 1947. It stated that its preliminary figures for July indicate a "small recession" in civilian travel, as compared with the corresponding 1946 month.

The petitioner told the commission that

although its 1946 gross was approximately 20 per cent below that of 1944, the average number of cars operated could be reduced by only 12 per cent despite a 22 per cent reduction in the number of passengers carried. It said that the average number of passengers carried in June was 14.65 persons per car, or 31 per cent below the 1944 occupancy.

In support of its petition, Pullman asserted that its annual operating costs since 1942 have risen by approximately $26,100,000 due to increases in wages, employee retirement benefits, materials and supplies and laundry expenses. It said that its operating income for the first six months of 1947 was $1,859,566, as compared with $9,045,264 for 1945 and $4,779,852 for 1946.

Pullman added, however, that its operating income does not reflect its payments to the Reconstruction Finance Corporation for the rental of government-owned special troop sleepers—which were used during the war and have now been returned to the government—or the car rentals paid by Pullman to those railroads which in 1946 leased railroad-owned lightweight sleepers to Pullman for operating purposes. Taking these and other items into consideration, the petition put the adjusted operating income at a deficit of $2,324,238 for 1946 and $721,443 for the first six months of 1947. Under the terms of its operating agreements with the railroads, Pullman said, a part of the revenue derived from the proposed rate increase will of necessity operate to reduce contract deficit payments by those roads on which sleeping car operations have been unprofitable, but to that extent will not increase Pullman's net income.

Examiner Pyle Dies

Lawrence A. Pyle, 61, an examiner in the Interstate Commerce Commission's Bureau of Formal Cases, died in Emergency Hospital, Washington, D. C., on August 8, following a prolonged illness. Mr. Pyle had been in the employ of the commission for 40 years.

Data on Air Freight's Growth

Although air cargo handled by both certificated and non-scheduled airlines has shown a "spectacular and continuing" growth since the end of World War II, it still constitutes only a very small percentage of all domestic intercity freight traffic. This was brought out in the "National Air Cargo Survey," recently completed by the Department of Commerce, the results of which appear in the department's June-July "Industry Report on Domestic Transportation."

According to the survey, preliminary estimates of the volume of domestic intercity commodity traffic during 1946 indicate a total of more than 907 billion ton-miles. Steam and electric railroads are credited with having moved 66.19 per cent of the total, including mail, freight and express. Motor carriers of property handled 7.36 per cent; oil pipelines, 13.15 per cent; inland waterways, including the Great Lakes, 13.29 per cent; and airways (certificated and non-scheduled air cargo carriers), .01 per cent.

Commodity traffic handled by air in 1946 is estimated at 123 million ton-miles. Of this total, air mail accounted for 33 million ton-miles; air express, 24 million; air freight by certificated air lines, 19 million; and air freight by non-scheduled lines, 47 million.

Roads' Views on Application of Any Ex Parte 166 Increase

Chairman Aitchison of the Interstate Commerce Commission has acknowledged receipt of an August 20 letter from Jacob Aronson, vice-president and general counsel, New York Central, and chairman, committee of counsel for the petitioning railroads in Ex Parte No. 166, that it is the intention of the railroads that the increases sought should apply to whatever rates are in effect at the time of the commission's decision, including rates published but not effective as of that date and also rates prescribed by outstanding orders of the commission, when and as the rates therein prescribed become effective.

Registration of Lobbyists

The August 15 issue of the Congressional Record lists registrations received during the second quarter of 1947 by the clerk of the House of Representatives and the secretary of the Senate under the provisions of the Regulation of Lobbying Act enacted last year. Previous lists appeared in *Railway Age* of January 11, page 157; February 15, page 379; and May 31, page 1143.

The August 15 list, with reported salaries, included the following:

Abram, Richard; the Brotherhood of Railroad Trainmen; $14.75 per day salary, plus per diem for expenses.

Bailey, Frazer A.; the National Federation of American Shipping; $15,000 per annum.

Bennett, William F.; Trailercoach Dealers National Association; $9,000 per annum.

Bioch, Charles J.; Georgia Southern & Florida, Southern and allied lines; his firm receives annual compensation of $3,600.

Brown, C. Edgar; Associated Railroads of New York State; $125 per week.

Burke, Thomas F.; Pennsylvania Employees' Committee for Low Cost Retirement Benefits; $300 per month.

Cates, Lawrence; Air Line Pilots Association; $7,000 per annum.

Columbus, Frank S.; Brotherhood of Locomotive Firemen and Enginemen; $10 per day salary plus per diem for expenses.

Crowley, Leo J.; Colorado Railroad Association; monthly retainer.

Ervin, S. J., Jr.; Southern; employed on an annual basis at a yearly salary of $2,400 as attorney in five North Carolina counties.

Eubanks, Raymond C.; Brotherhood of Railroad Trainmen; $14.75 per day salary and per diem for expenses.

Finkel, W. H.; Pennsylvania Employees Committee for Low-Cost Retirement Benefits; $300 per month.

Gray, Harding F.; the Order of Railroad Telegraphers; $325 per month salary and per diem for expenses.

Haas, Herbert A.; Pennsylvania Employees Committee for Low-Cost Retirement Benefits; $300 per month.

Hobbs, L. W.; Union Pacific; annual salary for his work as its general attorney at Portland, Ore.

Lewis, George J.; Kentucky Railroad Association; $2,000 per annum.

McIssac, John R.; Brotherhood of Railroad Trainmen; $14.75 per day salary and per diem for expenses.

McKercher, M. C.; Order of Railroad Telegraphers; $325 per month salary and per diem for expenses.

Madaris, J. B.; Brotherhood Railway Carmen of America; $350 per month salary plus expense allotment.

Marshall, J. P.; Railroad Security Owners Association; salary not determined.

Mathews, P. H.; New York, New Haven & Hartford.

Monteith, Galloway; Brotherhood of Railway Clerks; $15 per day plus expenses.

Pierson, A. T.; New York, New Haven & Hartford.

Reid, H. V.; Brotherhood of Locomotive Firemen and Enginemen; $7,000 per annum salary plus expenses.

Shorb, P. E.; Railroad Security Owners Association; salary not determined.

Skinner, W. E.; Brotherhood of Railroad Trainmen; $14.75 per day salary and per diem for expenses.

Smith, Sidney P.; Southern; expenses only.

Tobin, F. A.; International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers; $1,000 per month salary.

Vogt, J. F.; Pennsylvania Employees Committee for Low-Cost Retirement Benefits; $300 per month.

Watson, J. R.; Mississippi Railroad Association; $4,500 per annum.

Withers, Hamilton E.; Brotherhood of Railroad Trainmen; $14.75 per day salary and per diem for expenses.

Approves Increased Loading Charges in East

Increases proposed by the railroads in their charges for loading and unloading carload freight at various points in Official Classification territory have been approved as "just and reasonable" by Division 2 of the Interstate Commerce Commission. The commission's report in I. & S. No. 5466 is accompanied by an order which vacates as of September 2 the order suspending the railroad tariffs originally filed to become effective March 1.

The increase will raise from 94 cents per ton, net or long as rated, to $1.56 per ton of 2,000 lb. the charge for so-called "complete service," which includes coopering, sorting, stowing by specific locations, and the making of split deliveries. The charges for so-called "simple service" which covers only loading or unloading will be increased to 94 cents per ton of 2,000 lb.; they have been 69 cents per ton, net or long as rated, when the freight was handled over freighthouse platforms or through freighthouses, and 56 cents per ton, net or long as rated, when the service was performed on team tracks.

Among the numerous points at which the increased charges will apply are Chicago, St. Louis, Mo., Cincinnati, Ohio, Cleveland, Youngstown, Pittsburgh, Pa., Buffalo, N. Y., Louisville, Ky., Detroit, Mich., Indianapolis, Ind., and Newark, N. J. Charges in the same amounts have been in effect at Baltimore, Md., Boston, Mass., and Washington, D. C.

The increases were protested by the freight forwarders whom the commission's report identified as the "principal shippers who request these services," especially the "complete service." After considering contentions of the protestants the commission concluded that the proposed charges were "no higher than necessary to cover the cost of performing the service."

Emergency Board Reports

The White House has made public the reports of emergency boards which investigated disputes between the Terminal Railroad Association of St. Louis and employees represented by the Brotherhood of Railway

Clerks and between the River Terminal, which is controlled by the Republic Steel Corporation, and the Brotherhood of Railroad Trainmen.

The T.R.R.A. dispute, which involved approximately 1,200 employees, dealt with two working rules. One pertained to the method of payment for Sunday work and the other to payment for service of less than eight hours by employees called to perform service on assigned rest days, Sundays and holidays.

The board recommended the continuance of the present rule providing the method of payment for Sunday work, but at the same time recommended elimination of a note excepting employees in the baggage and mail handling department from certain provisions of the rule. Adoption of the employees' proposed rule with slight modifications providing for payment of eight hours at time and one-half for employees called to work on their rest day or on Sundays and designated holidays was also recommended by the board.

The River Terminal dispute concerned demands of the B. of R.T. for a premium rate of pay similar to that enjoyed by other railroads controlled by steel companies, in addition to certain changes in the working rules and conditions.

The board reported that after hearing and mediation, the parties reached an agreement granting a premium of 6½ cents per hour in the wage rate, and holding in abeyance the request for rules changes until after the settlement of the national rules movement.

Wharfage Case Again Lost by Army

(*Continued from page 57*)

to perform such services or pay an allowance therefor. This part of the report embraced a discussion of the development of the export-rate structure; and the commission there found it "clear" that the level of the port rates "does not reflect the additional services performed at the ports." It also said that "it should be emphasized that the line-haul rates charged on this traffic were and are less than reasonable maxima."

Dissenter Splawn disagreed with the majority's interpretation of the tariff provisions on which the Army relied, and he also expressed his view that the majority erred in concluding that the precedent of the terminal-services cases was applicable. "In my opinion," he concluded, "the rates charged were inapplicable, unreasonable and unjustly discriminatory, and the refusal of defendants to perform the handling charges and to furnish wharfage, or in lieu thereof to pay the Army an allowance, was an unreasonable practice."

Dissenter Alldredge addressed himself in the main to the majority's pronouncement that "it is neither the legal duty of the railroads to provide piers, which are essentially steamship facilities, nor to load or unload carload freight except in unusual circumstances." This statement, Mr. Alldredge called "at best, only partly correct," as applied to the factual situation under consideration. He went on to say that "any attempt to correlate with the ownership of piers the duty of loading or unloading freight at points of connection between different transportation lines would produce a *non sequitur*, as it does here."

"It has [long] been recognized," Mr. Alldredge continued, "that a railroad's duty, when it receives freight for shipment beyond its own lines, is to take all steps reasonably necessary to effectuate delivery to its connection en route to final destination. . . . That this duty extends to a connecting water line was specifically recognized in *Texas & Pacific Ry. Co.* v. *Reiss*, 183 U. S. 621,625." He also found in *El Dorado Terminal Co.* v. *General American Tank Car Corp.*, 208 U. S. 422, authority for asserting that if transfer of shipments is a common carrier obligation the carriers "must afford it upon reasonable terms, or, if in changed circumstances, the shipper relieves the carrier of its burden, then the former is entitled to receive a just and reasonable allowance." He added, however, that "even if an allowance were not proper, there are other provisions of the law which would intervene to protect the government in this case against the exaction of unreasonable or unjustly discriminatory charges as pointed out by Division 2 in the first report."

Accounting Order

The Interstate Commerce Commission has further amended the Uniform System of Accounts for Steam Railroads. The order by Division 1 was dated August 4 and becomes effective January 1, 1948.

The amendments provide for the operations of stock yard companies; modify in minor particulars the income-statement form; and provide a new general balance sheet account—769 Pension and Welfare Reserves—which will supplant the present account of the same number, entitled "Liability for Provident Funds." The order also brings the classification into line with commission decisions in the so-called post-driving and grouting cases, providing for charging the cost of such work to operating expenses.

I.W.C. Is Authorized to Extend Operations to Omaha

Rejecting the request of the protestant rail carriers for a hearing in the proceeding, Division 4 of the Interstate Commerce Commission has authorized the government-owned Inland Waterways Corporation to extend its Federal Barge Lines operations between ports and points along the Missouri river from Kansas City, Kans., to Omaha, Neb. The commission's certificate, which authorizes year-round operation in order that the applicant may provide service at any time navigation is possible, becomes effective September 28.

The I. W. C.'s application—in which seasonal operation (March to November, inclusive) was proposed—was assigned for hearing, but the applicant filed a motion, to which the railroads replied, requesting that the hearing be canceled and that the certificate sought be issued "without further formality or hearing." The commission, noting the I. W. C.'s contention that the question of public convenience and necessity for the proposed operation is foreclosed by Section 3(b) of the Inland Waterways Corporation Act, as amended, said that "in view of the conclusion . . . reached with respect to the sufficiency of the record . . . it is unnecessary to decide the question presented by the motion as to whether or not the applicant is entitled to a certificate, as of right, without a hearing."

According to the commission, the rail carriers, in protesting the application, requested, in effect, that it be assigned for hearing and that they be given the opportunity to cross-examine witnesses on the statements contained in the application. "This would indicate," the commission said, "that if a hearing is held they would also submit evidence with respect to transportation facilities generally in the territory involved to show that public convenience and necessity do not require the proposed service. For purposes of discussion, it may be assumed that protestants would introduce evidence to show that there is adequate service by rail and highway between the points covered by the application. However, such showing would not alone warrant denial of an application for authority to perform water-carrier operations. . . . We are of the view that the application and the information adduced with respect thereto constitute a sufficient showing to enable determination of the proceeding, and that a hearing therefore is not necessary."

The commission's report stated that I. W. C. plans to make one trip to Omaha monthly, operating two dry cargo barges and one towing vessel. It said that the applicant, which made one survey trip to Omaha and return in the latter part of 1946, estimates that it will transport 28,500 tons of cargo annually in the extended service. The commission said that shippers at Omaha and other Missouri River ports are of the view that there is a need for the establishment of "permanent and reliable transportation service" on the Missouri above Kansas City and that such service should be afforded them "in order that they may avail themselves of the natural advantages inherent in water transportation."

Representation of Employees

The Brotherhood of Railroad Trainmen has retained the right to represent yardmasters employed by the Louisiana & Arkansas as the result of a recent election which has been certified by the National Mediation Board. The B. of R. T. defeated the Railroad Yardmasters of America, 9 to 0.

As the result of other elections which also have been certified by the N. M. B., New Jersey, Indiana & Illinois maintenance of way employees (below the rank of supervisor in the track department and general foreman in the bridge and building department, and not including clerical employees or employees in the signal, telegraph and telephone maintenance departments) and Cuyahoga Valley yardmasters, all of whom formerly were without representation, are now represented by the Brotherhood of Maintenance of Way Employees and the B. of R. T., respectively.

The Brotherhood of Railroad Trainmen has defeated the Order of Railway Conductors in two recent representation contests on the Chicago & Illinois Midland, according to results of elections which have been certified by the National Mediation Board. One election resulted in the B. of R. T. supplanting the O. R. C. as Railway Labor Act representatives of C. & I. M. road conductors, while the other resulted in eliminating the O. R. C. from its former joint participation with the B. of R. T. in the representation of yardmen.

The latter case arose when controversy developed concerning the joint agreement under which the railroad had recognized the O. R. C. as representative of yard conductors and foremen and the B. of R. T. as representative of yard helpers. The Mediation Board, after public hearing, concluded that the controversy was a representation dispute and ordered the election in which the B. of R. T. won the right to represent all the yardmen.

Meanwhile, the O. R. C. had defeated the B. of R. T. on the Lehigh & New England, thereby retaining its right to represent road conductors of that line. In another recent election the United Railroad Workers of America, Congress of Industrial Organizations, supplanted the American Federation of Labor's International Brotherhood of Oilers, Helpers, Roundhouse and Railway Shop Laborers as representative of powerhouse employees of the Chicago Union Station Company. The same C. I. O. union has also been certified as representative of Central of New Jersey tug dispatchers who were previously without representation.

As a result of checks of representation authorizations, the board has certified the American Train Dispatchers Association as representative of New York, Ontario & Western train dispatchers, and the International Brotherhood of Electrical Workers, A. F. of L., as representative of coal tipple operators employed by the St. Louis-San Francisco.

Tennessee Intrastate Rates

The Interstate Commerce Commission has set back from September 4 to October 21 the hearings in connection with its investigation into the refusal of the Railroad and Public Utilities Commission of Tennessee to permit intrastate freight rate increases in line with the Ex Parte 162 interstate adjustment. The hearings will be held at Nashville, Tenn., before Examiner F. L. Sharp.

Dr. Nelson Resigns Commerce Transportation Position

The Department of Commerce has announced the resignation of Dr. James C. Nelson, chief of the Transportation Division, Office of Domestic Commerce. Dr. Nelson has been named a professor of economics at Washington State College where, according to the department, his major work will be in the field of transportation.

Dr. Nelson came to the Department of Commerce in January, 1945, after having served with the Office of Defense Transportation and the Bureau of Investigation and Research.

I. C. C. Again Sets Back Hearing Date on Per Diem Complaints

The Interstate Commerce Commission has set back from September 16 to October 14 the resumption of hearings in the Docket Nos. 29587 and 29751 proceedings, both of which pertain to per diem complaints. As noted in *Railway Age* of July 26, page 97, the hearings had been set back from August 4 to September 16. The October 14 session will be held at the commission's Washington, D. C., offices before Examiner Rice.

The Docket No. 29587 proceeding involves a complaint filed by the short lines, which, in addition to assailing per diem rates in effect since February 1, 1945, have asked the commission to cut the rate to 95 cents—or to other such basis as it may determine—and to award reparations. The No. 29751 proceeding embodies a complaint filed by six western roads which charged that the $1.25 rate, which has been increased to $1.50, effective September 1, and to $2, effective October 1, is too low and is a contributing factor to the freight car shortage. As noted in *Railway Age* of June 28, page 1326, hearings in both proceedings were held in May.

M.P. Affiliate Given More Time to Reply to Signaling Order

The Interstate Commerce Commission has issued a corrected order in the Docket No. 29543 proceeding so as to include the St. Louis, Brownsville & Mexico among those roads which have been given until September 16 to file petitions for exceptions from or modification of the commission's order requiring the installation by the railroads of automatic train-stop or train-control systems, cab signal systems or automatic block signals on lines over which high speed trains are operated. As noted in *Railway Age* of August 23, page 52, the Missouri Pacific and several of its other affiliates, including the International Great Northern, had been given a one-month extension from August 17 to reply to the commission's order.

Meanwhile, the commission has received a petition from the Norfolk & Western for modification of the June 17 order to permit operation by it of passenger trains at speeds of 90 m.p.h. between its eastern yard limits at Portsmouth, O., and Ironton, 23.1 miles, and between Poe, Va., and Norfolk, 70 miles. Both segments, according to the N. & W., are now operated under automatic signal indication, timetables and train orders. It said that an expenditure of $500,000, in addition to annual maintenance costs of $150,000, would be required to comply with the commission's order.

Intervention by Water Carriers in Ex Parte 166 Permitted

The Interstate Commerce Commission has permitted the Inland Waterways Corporation, operator of the Federal Barge Lines, and the American Barge Line Company to intervene in the Ex Parte 166 proceeding, wherein the railroads seek freight rate increases estimated to yield over $1 billion in additional annual revenue. The contentions of the water carriers, which seek corresponding increases in their rail-ocean, ocean-rail and rail-ocean-rail rates, were outlined in *Railway Age* of August 23, page 54.

Anti-Trust Judgment Against Northwest Bus Operators

The Department of Justice announced in Washington, D. C., this week that a judgment has been entered in the district court at Seattle, Wash., ordering the Puget Sound Power & Light Co. and the North Coast Transportation Company to sell all their interests in the operating rights of Independent Stages, Inc. which operates a bus line between Seattle and Portland, Ore. The court order also cancels agreements which, as the department's statement put it, "deterred the establishment of through routes between the latter and feeder lines."

The complaint in the case was filed November 20, 1946. It charged that violations of the Sherman Act resulted from the setting up and maintaining of Independent as a "fighting ship," i.e., "a bus line operated over the same route as the bus line which controlled it for the purpose of fighting and discouraging competition rather than providing service to the public." It was also charged that there was conspiracy to prevent competitive bus lines from entering into through-travel arrangements with the defendants.

A. A. R. Loading Rules Outlined in New Booklet

A revised edition of the Rules Regulating the Safe Loading of Freight Cars and Protection of Equipment has been issued by the Freight Loading and Container Section of the Association of American Railroads. The text of the 68-page illustrated booklet, identified as Pamphlet No. 14, has been approved by the general committee of the Operating-Transportation Division of the A. A. R. It includes a Dictionary of Standard Terms for Use in Describing Loading and Bracing Methods for Shipments of Commodities in Closed Cars, and this dictionary is separately available as Pamphlet No. 41. The publications are distributed through A. H. Grothmann, secretary of the section, at 59 East Van Buren street, Chicago 5. The prices for single copies are 15 cents for No. 14 and 5 cents for No. 41; larger quantities are supplied at lower unit prices.

Construction

PENNSYLVANIA. — This road and its lessor, the Philadelphia, Baltimore & Washington, have applied to the Interstate Commerce Commission for authority for the latter to construct and the former to operate a line extending approximately 6 miles from the applicants' Bay View yards at Baltimore, Md., to a connection with the Patapsco & Back Rivers. The latter also seeks commission authority to construct a 3.4-mile segment to improve its interchange facilities with the Pennsylvania and Baltimore & Ohio.

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but WAITING FOR RE-ASSIGNMENT!

The modern steam locomotive was designed to be a high revenue producer. The engineers that design them use all their skill to make possible a high monthly mileage. The railroads that buy them count on this mileage. Yet the locomotive's potential money making capacity is often stymied because scheduling has not been revised to take full advantage of the improvements in steam locomotive design.

Modern steam locomotives are more efficient because they can haul heavier payloads at higher sustained speeds. Study the availability of your modern power. Streamline schedules to use this power to the fullest. Operating results will prove that modern steam power, given the chance, is more than capable of meeting today's and tomorrow's traffic demands.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

Equipment and Supplies

FREIGHT CARS

The CHICAGO, INDIANAPOLIS & LOUISVILLE has ordered 50 70-ton 65-ft. drop-end mill-type gondola cars from the Greenville Steel Car Company and 300 50-ton 41-ft. 3-in. fixed-end high-side gondola cars from the Pullman-Standard Car Manufacturing Company. An inquiry by this road for 200 gondola cars was reported in the *Railway Age* of March 15, page 573. The Monon now has inquiries out for 200 50-ton 40½-ft. steel box cars, 100 50-ton 50½-ft. steel box cars, 100 70-ton self-clearing hopper cars, 50 50-ton 52½-ft. flat cars and 25 40-ton 40½-ft. stock cars.

The CHESAPEAKE & OHIO is inquiring for 1,000 50-ton high-side gondola cars, 500 70-ton covered hopper cars and 150 30-ton cabooses.

SIGNALING

The ATLANTIC COAST LINE has placed an order with the Union Switch & Signal Co. for the signaling materials required to install an electro-pneumatic interlocking at Florence, S. C. This new terminal plant will be of the all-relay direct-wire type, using a Style-C 5-ft. floor-type control machine, H-2 searchlight high and N-2 dwarf color-light signals, Style A-5 electro-pneumatic switch movements for the single switches, single and double slips and movable-point frogs and the necessary relays, rectifiers, transformers and housings. The functions at Dargen street, adjacent to the terminal layout, will also be handled from this Florence control machine by direct-wire remote circuits, with A-21 dual-control electro-pneumatic switch movements and color-light signals at that point. The installation will be handled by regular construction forces of the railroad.

The PERE MARQUETTE has ordered material from the General Railway Signal Company for the installation of Type-K two-wire centralized traffic control on 42.6 mi. of single track and 7.8 mi. of double track between St. Joseph, Mich., and East Saugatuck. The control machine, comprising 70 lin. in. of panel, will be added to an existing machine at Waverly. The new panels will be equipped with 44 track occupancy indication lights and 40 levers for the control of 12 electric switch machines, 45 electric switch locks, and 51 signals. A 23-point automatic train recorder of the self-inking pen type will be built into the new machine. Equipment ordered includes Type-B plug-in relays, welded steel bungalows, Model-9A electric switch locks, Model-5D dual-control electric switch machine, and Type-SA searchlight signals.

The WESTERN MARYLAND has placed an order with the Union Switch & Signal Co., covering materials for the installation of an electro-pneumatic interlocking plant at Walbrook, Md., involving a Style-TC table interlocking machine for controlling three two-unit Style-R color-light ground signals, two N-2 color-light dwarf signals, and three A-21 electro-pneumatic switch movements, with the necessary relays, transformers and housings. The installation will be handled by the road's construction forces.

IRON AND STEEL

The MISSOURI PACIFIC has been authorized by the federal court at St. Louis, Mo., to purchase 14,065 net tons of 132-lb. rail, 42,285 net tons of 115-lb. rail and the necessary tie plates, rail anchors, angle bars and metal fastenings. The rails will cost $3,064,500 and the track material will cost $2,152,892.

Supply Trade

Norman F. Woods, whose appointment as assistant to the vice-president of the **Apex Railway Products Company,** Chicago, was reported in *Railway Age* of August 16, was born in Chicago, and holds a degree in mechanical engineering

Norman F. Woods

from Marquette University. Prior to enlisting in the U. S. Navy Air Corps in 1942, Mr. Woods was a production engineer with General Motors Corporation.

L. A. Weom has been appointed manager of the pump division of **Fairbanks, Morse & Co.,** with headquarters at Chicago, succeeding **Arnold Brown,** who has resigned. Mr. Weom joined the company in January, 1929, as an assistant in the pump and electric department of the company's branch at St. Paul, Minn. Early in 1932 he became a field engineer covering South Dakota and western Minnesota. In 1936 he was promoted to manager of the pump and electric department at St. Paul, the position he held at the time of his recent appointment.

Albert Musschoot, a member of the general engineering staff of the **Link-Belt Company,** at Philadelphia, Pa., has been appointed assistant to the chief engineer, with headquarters at the company's general office, 307 North Michigan avenue, Chicago.

Charles F. Kahnhauser has been appointed sales manager of metal decorating products for the finishes division of the **Interchemical Corporation,** with headquarters in the Philadelphia, Pa., district office. Mr. Kahnhauser was formerly a varnish salesman for the Ault & Wiborg Co., Cincinnati, Ohio, now a part of Interchemical, and has been in the Philadelphia office of the parent company since 1942.

Granville M. Fisher has been appointed railway finishes salesman in the New England and New York area for the finishes division of **E. I. du Pont de Nemours & Co.,** with headquarters in New York, to succeed the late **Roy A. Phelps.**

L. A. Weom has been appointed manager of the pump division of **Fairbanks, Morse & Co.,** to succeed **Arnold Brown,** resigned. Mr. Weom was formerly manager of the pump and electric department of the company's St. Paul, Minn., branch.

J. K. Rector, formerly assistant advertising manager of the E. W. Bliss Company has been appointed advertising and sales promotion manager of the **Watson-Stillman Company,** Roselle, N. J.

The **Philadelphia Steel & Wire Corp.** has appointed **L. P. Brassy,** 55 New Montgomery street, San Francisco, Cal., as its agent covering the western territory.

Thor Thornson has been appointed general sales manager in charge of sales, advertising and promotion for the **Aire-tool Manufacturing Company.** Mr. Thornson will head a staff of representa-

Thor Thornson

tives serving the refinery, marine, power and locomotive repair industries. As a refinery engineer, he has spent 15 years in oil refineries in Michigan and Canada.

OBITUARY

M. D. Miller, who retired in 1945 as president of the Railroad Water & Coal Handling Co. and the T. S. Leake Construction Company, both of Chicago, died on August 24 in a hospital at Rhinelander, Wis., at the age of 82 years. Mr. Miller first entered the railroad field in 1887

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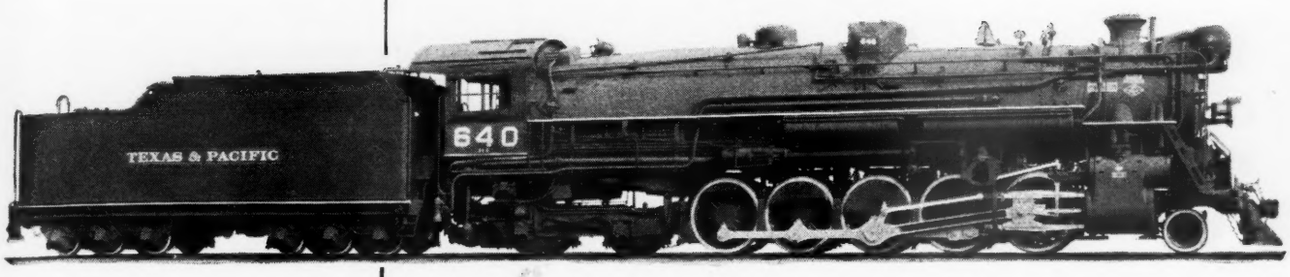
NEW BOOSTERS* FOR OLD



TEXAS & PACIFIC

replaces old Boosters with latest type in complete modernization of 10 locomotives*

In connection with its program of completely modernizing ten 2-10-4 locomotives, Texas and Pacific Railway is replacing 1926-built C-2 Boosters with the latest E-1 type.

The old Boosters earned their retirement by giving 20 years of good service. With the new Boosters, Texas and Pacific will have more initial drawbar pull (15,000 pounds at start), improved efficiency, reduced maintenance, and a Booster that can be cut in at higher speeds, worked up to 30 mph.

AUTOMATIC COMPENSATORS AND SNUBBERS are also being installed in connection with the equipping of these ten locomotives with roller-bearing rods and boxes. This Franklin equipment, applicable to either surface- or roller-bearing boxes, prevents slack, cushions abnormal shocks, and protects closely fitting parts.

Trade Mark Reg. U. S. Pat. Off.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

when he went to work for the Illinois Central, eventually becoming general foreman of water works. In 1904 he resigned to go with the Missouri Pacific, leaving that road in 1911 to become connected with the T. W. Snow Construction Company, Chicago. In 1914 he went into business for himself, organizing the Railroad Water & Coal Handling Company and later acquiring control of the T. S. Leake Construction Company.

Financial

BALTIMORE & OHIO.—*Financial Readjustment.*—Division 4 of the Interstate Commerce Commission has authorized this company to pledge and repledge all or any part of $75,000,000 of first mortgage 5 per cent bonds, $45,000,000 of Southwestern division first mortgage 5 per cent bonds, and $63,031,000 of 30-year 4½ per cent convertible bonds, which it may reacquire and hold uncanceled, as collateral security for short term notes. The pledge or repledge is to be made and, if required by the payee, to be maintained in the ratio of not exceeding $125 of bonds, at the prevailing market price at the time of the pledge, to each $100 face amount of notes.

The commission also has authorized the B. & O. to pledge and repledge all or any part of not exceeding $36,798,000 of Pittsburgh, Lake Erie & West Virginia Series A 4 per cent refunding mortgage bonds, and $122,639,000 of Series G, J, K, and M refunding and general mortgage bonds, which it may reacquire and hold uncanceled, as collateral security for short term notes, subject to similar conditions.

CENTRAL OF NEW JERSEY.—*Reorganization.*—Division 4 of the Interstate Commerce Commission has authorized R. E. O'Dea, of Paterson, N. J.; W. A. Rutan, of Paterson; H. F. Hewitt, of New York; and G. L. Augustus of New York to serve as a protective committee for holders of the capital stock of this road, now under the process of reorganization under Section 77(p) of the Bankruptcy Act.

CHESAPEAKE & OHIO.—*Distribution of Nickel Plate Stock.*—The Interstate Commerce Commission has permitted H. D. McGeorge, a preferred stockholder of the New York, Chicago & St. Louis and chairman of a stockholders protective committee of that road, to intervene in the proceeding wherein the C. & O. and Alleghany Corporation seek authority to distribute 192,400 shares of Nickel Plate common stock. Details of the application were reported in *Railway Age* of August 16, page 74.

DELAWARE, LACKAWANNA & WESTERN.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $2,800,000 of Series F 2⅛ per cent equipment trust certificates, the proceeds of which will be applied toward the purchase of 10 Diesel-electric locomotives, estimated to cost $3,537,456, as outlined in *Railway Age* of August 2, page 62. The certificates will mature in 20 equal semiannual installments from February 15, 1948, through August 15, 1957. The report also approves a selling price of 99.265, the bid of Halsey, Stuart & Co. and associates, on which basis the average annual cost will be approximately 2.27 per cent.

GEORGIA, FLORIDA & ALABAMA.—*Amended Plan of Reorganization.*—This road has filed with the Interstate Commerce Commission an amended plan of reorganization under which it would operate as an independent short-line carrier apart from the Seaboard Air Line. As noted in *Railway Age* of July 12, page 97, hearing on the road's original plan, to which reference was made in the issue of June 21, page 1283, is scheduled before Examiner C. A. Bernhard at the commission's Washington, D. C., offices on September 3.

According to the applicant, operation of its property as part of the S. A. L., as contemplated in the original plan, would result in an annual operating deficit of approximately $180,000. Under the amended plan, capitalization of $2,850,000, including $1,750,000 of 4½ per cent income bonds due in 1998 and $1,100,000 (11,000 shares) of no par common stock, would be set up. The road would allocate, on a par for par basis, the income bonds to holders of its first mortgage bonds, while $1 million of the common stock would be issued to holders of its first preferred stock. The remaining $100,000 in common stock would be issued on a pro rata basis to holders of second preferred stock.

The applicant's amended plan also would authorize the S. A. L., which holds a large amount of G. F. & A. bonds, to name one member of the G. F. & A. board of directors so long as the S. A. L. continued to own any of those securities.

ILLINOIS CENTRAL.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $2,500,000 of Series Y equipment trust certificates, the proceeds of which will be applied toward the purchase of 781 box cars at an estimated cost of $3,128,469. The certificates will mature in 20 equal semi-annual installments from February 1, 1948, to August 1, 1957, inclusive. The report also approves a selling price of 99.403 with a 2 per cent interest rate, the bid of Harris, Hall & Co. and associates, on which basis the average annual cost will be approximately 2.13 per cent.

READING.—*Merger of Williams Valley.*—This company has applied to the Interstate Commerce Commission for authority to merge the Williams Valley into the Reading. The Valley, which extends 11 miles from Williams Valley Junction, Pa., to Lykens, is controlled, through stock ownership, by the Reading, which has operated it since 1929. The transaction would simplify the corporate structure of the Reading and result in tax savings.

RUTLAND.—*Trustee.*—Division 4 of the Interstate Commerce Commission has ratified the court appointment of O. O. Edlund as trustee of the property of this road, and has approved $1,800 yearly as the maximum compensation to be paid him for such service.

SOUTHERN PACIFIC.—*Reincorporation.*—Division 4 of the Interstate Commerce Commission has authorized this company, a Delaware corporation, to acquire the properties and take over the operations of the Southern Pacific, a Kentucky corporation, and to acquire control, through ownership of stock, of carriers controlled by the Kentucky corporation. The transaction, which was approved subject to the usual employee-protection conditions, was instituted by the S. P. in order to escape what were regarded as excessive tax burdens in Kentucky. The road's stockholders approved the reincorporation plan May 14. The commission's report also authorizes the Delaware corporation to issue 3,722,763 shares of common stock and to assume all obligations of the Kentucky corporation with respect to its securities, including $564,012,000 of bonds; $47,801,000 of equipment trust certificates; and $2,264,735 of notes.

Dividends Declared

Bangor & Aroostook.—5% preferred, $1.25, quarterly, payable October 1 to holders of record September 10.

Erie & Pittsburgh.—7% guaranteed, 87½¢, quarterly, payable September 10 to holders of record August 30.

European & North American.—$2.50, semi-annually, payable October 3 to holders of record September 11.

Philadelphia, Germantown & Norristown.—$1.50, quarterly, payable September 4 to holders of record August 20.

Southern Pacific.—$1.00, quarterly, payable September 22 to holders of record September 2.

Union Pacific.—common, $1.50, quarterly; 4% preferred, $2.00, semi-annually, both payable October 1 to holders of record September 2.

Average Prices Stocks and Bonds

	Aug. 26	Last week	Last year
Average price of 20 representative railway stocks..	47.87	48.99	57.96
Average price of 20 representative railway bonds..	89.24	89.71	95.06

Organizations

An **institute on packaging and material handling** techniques will be held by the Wayne University School of Business Administration, September 29 to October 3, inclusive, at the Rackham Memorial Building, Detroit, Mich. Cooperating with the Industrial Packaging Engineers Association, the university will present lectures by packaging and material handling authorities, followed by open forum discussions and exhibits.

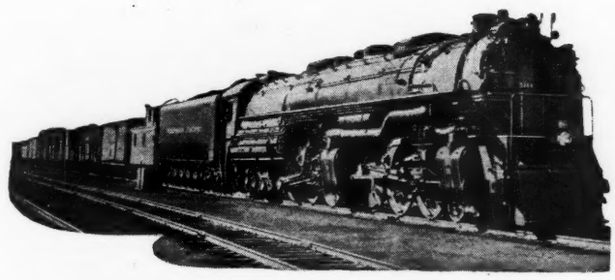
A trip on the Morristown & Erie has been arranged for railroad fans by the **New York Joint Railfan Trip Committee** on September 20.

The second annual convention of the **Army Transportation Association** will be held at the Hotel Pennsylvania, New York, October 9 and 10.

News Department continued on next left-hand page.

More Locomotive Mileage

through increased availability



• The installation of Security Circulators minimizes honeycombing, flue plugging and cinder cutting, so that, when circulator-equipped, an existing locomotive can operate for longer periods more efficiently.

The resulting gain in locomotive availability means that the cost of installing Security Circulators will rapidly be repaid through the increased earning power of the locomotive.

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NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

Abandonments

DETROIT, CARO & SANDUSKY.—This road has applied to the Interstate Commerce Commission for authority to abandon its line from Sandusky, Mich., to Peck, 12 miles.

LOUISVILLE & NASHVILLE.—This company has applied to the Interstate Commerce Commission for authority to abandon a branch from Fincastle, Ky., to Maloney, 6.07 miles.

PACIFIC COAST.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a 7.2-mile branch from Maple Valley, Wash., to Black Diamond, following abandonment of a coal mine, which was the main source of traffic.

POTOMAC EDISON.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon its line from Frederick, Md., to Middletown, 8.3 miles, and a 1.3-mile branch at Braddock Heights.

ST. LOUIS-SAN FRANCISCO.—This road has applied to the Interstate Commerce Commission for authority to abandon its line from a point near Mt. Vernon, Mo., to Miller, 8.2 miles.

WOOD RIVER BRANCH.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon its entire line, 5.7 miles from Hope Valley, R. I., to Wood River Junction. Passenger service was discontinued in 1937 and only two carloads of freight moved over the segment last April. The commission's report noted that the tributary territory is not dependent on the line for service because "such service can be provided adequately by other carriers operating in the area."

Overseas

GREAT BRITAIN.—The London & North Eastern has placed order for 140 steam locomotives, 70 of which will be of the 2-6-0 type and 70 of which will be tank engines of the 2-6-4 type. The order for the 2-6-4's was divided equally between Robert Stephenson & Hawthorns, Ltd., and the North British Locomotive Company. North British Locomotive will build all the 2-6-0 engines.

Car Service

I. C. C. Service Order No. 768, effective from September 2 until March 1, 1948, unless otherwise modified, restricts the free time on box cars loaded at the ports. The order prohibits railroads from allowing more than a total of 5 days free time on any box car held after loading at the point of transshipment from vessel to car or when held out of such transfer point prior to receipt of proper forwarding directions. This provision is not to be interpreted as requiring or permitting the increase of any free time published in tariffs. The order also requires railroads to place the loaded box cars involved in outbound trains and forward them "not later than 24 hours after receipt of proper forwarding directions."

I. C. C. Service Order No. 180 (fourth revised), which provided for "super-demurrage" charges on refrigerator cars, was suspended by Amendment No. 16, effective August 25. Thus until further order of the commission the demurrage charges on reefers will be the normal tariff charges.

Officers

EXECUTIVE

John Clayton Peterson, whose promotion to assistant to the president of the Minneapolis, St. Paul & Sault Ste. Marie, at Minneapolis, Minn., was reported in *Railway Age* of August 9, was born on February 27, 1908, at Winnipeg, Man., and received a degree in business administration at the University of Minnesota. He entered railroad service with the Soo line in 1928 as a clerk in the accounting department, and later served successively as accountant, general bookkeeper and special accountant. He became special accountant assigned to the executive department in 1940 and assistant comptroller in 1943. Mr. Peterson held the latter position at the time of his new appointment.

C. B. Whitlow, whose election to president of the Gulf Transport Company (highway subsidiary of the Gulf, Mobile & Ohio), with headquarters at Jackson, Tenn., was reported in *Railway Age* of August 9, was born on September 4, 1906, at Jackson, and received his higher education at Union University. Mr. Whitlow began his railroad career with the Gulf, Mobile & Northern (now G. M. & O.) in 1928 as a clerk in the freight traffic department at Mobile, Ala. He also served in that capacity in the passenger department, and in the following year he became secretary to general counsel. In 1930 he was appointed secretary to development director at Jackson, Miss., and in 1931 he became secretary and chief clerk to district freight agent at Jackson, Tenn. Mr. Whitlow was advanced to secretary to the president in 1932, which position he held until 1940 when he was promoted to executive assistant. Following duty with the Navy from 1943 to 1945, he returned to the G. M. & O. as executive assistant. In January, 1947, he was appointed assistant to the president, with headquarters at Jackson, Tenn., the position he held at the time of his recent election to the presidency of the Gulf Transport Company.

A. M. Hand, superintendent of the Toronto Terminals, has been appointed assistant to the vice-president, eastern region, of the Canadian Pacific, with headquarters as before at Toronto, Ont., succeeding **G. N. Curley,** whose appointment as general superintendent of the Ontario district at Toronto, was reported in *Railway Age* of August 16.

FINANCIAL, LEGAL AND ACCOUNTING

Milton I. LaBelle, whose promotion to assistant comptroller of the Minneapolis, St. Paul & Sault Ste. Marie and the Duluth, South Shore & Atlantic, with headquarters at Minneapolis, Minn., was reported in *Railway Age* of August 9, was born on March 11, 1903, at Minneapolis, and entered railway service in 1920 with the Minneapolis & St. Louis. Joining the Soo line in 1926, Mr. LaBelle held various clerical positions, and was appointed chief clerk in 1932. He was advanced to assistant auditor of disbursements in April, 1943, and to auditor of disbursements in November, 1943. He held the latter position at the time of his recent promotion.

OPERATING

R. G. McLain, air express manager, eastern department of the Railway Express Agency, has been appointed superintendent, commercial division, New York city department of Railway Express Agency, with headquarters at New York. Mr. McLain succeeds **A. F. Hall,** who has been appointed superintendent, motor vehicle division. **James B. Finnin,** assistant to the air traffic executive at New York, succeeds Mr. McLain as manager of Air Express for the eastern departments.

Lawrence Richardson has been appointed assistant general manager (operations) of the New York, Susquehanna & Western, with headquarters at Paterson, N. J.

E. T. Watson, assistant superintendent of the Wyoming division of the Union Pacific, at Cheyenne, Wyo., has been appointed acting superintendent, with the same headquarters, succeeding **C. E. Breternitz,** who is recovering from a recent operation at Ogden, Utah. **E. F. Boyle,** general yardmaster, has been appointed trainmaster of the fifth subdivision, with headquarters as before at Cheyenne.

F. T. Scharlau has been appointed assistant superintendent, freight transportation, of the Chicago Junction, the Chicago River & Indiana, and the Indiana Harbor Belt, with headquarters at Chicago, a newly created position.

Harland H. Best, whose promotion to general superintendent of the Toledo, Peoria & Western, with headquarters at East Peoria, Ill., was reported in *Railway Age* of August 16, was born at Williamsfield, Ill., on October 11, 1894, and entered railroad service in the bridge and building department of the T. P. & W. in 1909. In 1917 he was granted a leave of absence to enter the Army, serving 18 months in France. He returned to his position with the railroad in March, 1919, was promoted to assistant master of bridges and buildings in 1921 and to master of bridges and buildings in 1931. In 1937 Mr. Best was advanced to superintendent, and in 1944 he became general manager of the road during its operation by the government.

News Department continued on next left-hand page.

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F. E. Kalbaugh, whose promotion to superintendent of transportation of the Southern Pacific at San Francisco, Cal., was reported in *Railway Age* of August 16, began his railroad career with the Southern Pacific in 1919 as a clerk at Bakersfield, Cal. He advanced in the road's operating department to successive positions as superintendent's chief clerk, assistant

F. E. Kalbaugh

trainmaster and trainmaster on various divisions. Mr. Kalbaugh was later appointed assistant superintendent of transportation, and since 1944 had been assistant superintendent, Western division, at Oakland, Cal.

C. E. Crippen, whose promotion to superintendent of terminals of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Minneapolis, Minn., was reported in *Railway Age* of August 2, was born at Austin, Minn., on December 20, 1907, and was graduated by the University of Minnesota in 1930. In the same year he entered the service of the Milwaukee, and he served as instrumentman at several points until July, 1933, when he became special water inspector at Chicago. He was appointed division engineer at Savanna, Ill., in December, 1936, and assistant engineer, system, at Chicago, in November, 1937. In December, 1940, Mr. Crippen was named fuel inspector, and a year later he became trainmaster at Minneapolis, whence in May, 1942, he was transferred to Milwaukee, Wis. From September, 1944, to February, 1946, he served in the armed forces. In March, 1946, he returned to the Milwaukee as assistant superintendent at Perry, Iowa, and in August of the same year he was appointed chairman of the president's committee, at Chicago, the position he held at the time of his recent promotion.

The Canadian Pacific, in conjunction with its regional redistribution announced on August 19 (see these columns, *Railway Age,* August 23), has announced the following additional personnel changes: **J. Ivan MacKay,** general superintendent of the Manitoba district, appointed general manager of the new Prairie region, with headquarters as before at Winnipeg, Man., succeeding **George H. Baillie,** whose appointment as vice-president of the new Pacific region at Vancouver, B. C., was reported in *Railway Age* of August 23; **W. F. Tully,** general superintendent, Quebec district at Montreal, Que., transferred to Winnipeg, succeeding Mr. MacKay; **D. S. Thomson,** assistant general manager of eastern lines, becomes general manager of the new eastern region at Toronto, Ont. (a photograph of Mr. Thomson and a sketch of his career were published in *Railway Age* of January 25, page 257); **E. S. McCracken,** general superintendent, Algoma district at North Bay, Ont., transferred to Vancouver; **F. M. Donegan,** superintendent at Sudbury, Ont., succeeds Mr. McCracken at North Bay; **F. A. Pouliot,** general manager, Quebec Central at Sherbrooke, Que., appointed general superintendent, Quebec district, succeeding Mr. Tully at Montreal; **J. N. Fraine,** superintendent, Laurentian division at Montreal, succeeds Mr. Pouliot on the Quebec Central (a photograph of Mr. Fraine and a sketch of his railway career appeared in *Railway Age* of January 25); **J. U. Brazeau,** assistant superintendent, Smith Falls, Ont., succeeds Mr. Fraine at Montreal; **D. A. Smith** superintendent, Schreiber, Ont., transferred to Sudbury, succeeding Mr. Donegan; **G. E. Mayne,** superintendent, Trenton division at Toronto, transferred to Schreiber, succeeding Mr. Smith; and **T. E. Wheeler,** assistant superintendent, Farnham, Que., transferred to Trenton division at Toronto.

Robert B. Gifford, whose appointment as superintendent of the Toledo, Peoria & Western, with headquarters at Peoria, Ill., was reported in *Railway Age* of August 16, was born on September 15, 1899, at Ma-

Robert B. Gifford

quoin, Ill., and attended Bradley Polytechnic Institute. He entered railroad service with the Peoria & Pekin Union as a yard clerk in 1916, and joined the T. P. & W. the following year. Mr. Gifford held positions successively as brakeman, conductor, trainmaster and acting superintendent. He was serving in the latter capacity at the time of his recent appointment.

TRAFFIC

George K. Bennett and **Alfred E. Arensman** have each been appointed general agents of the Illinois Terminal, representing the freight and passenger departments, with headquarters at New York. In an item in the *Railway Age* of August 23, the appointees were erroneously listed as representatives of the passenger department only.

Wallace M. Snow, whose appointment as general eastern freight agent of the New York Central system at New York, was reported in the *Railway Age* of

Wallace M. Snow

August 2, was born at Stoneham, Mass. Mr. Snow entered the service of the New York Central immediately after his graduation from Harvard with a bachelor of arts degree in 1925. After service in both the operating and traffic departments at Selkirk, N. Y., Rensselaer and Albany; New York; Peoria, Ill., and Chicago, and San Francisco, Cal., he became New England freight agent at Boston, Mass. Entering military service in 1942, Mr. Snow was one of the first officers in the organization of Major General Frank S. Ross' office of chief of transportation in the European theater, and was deputy assistant chief of transportation-movements both at London and later at Paris. Mr. Snow subsequently became port area transportation officer at Antwerp, when that Belgian port was opened to the Allied forces in November, 1944. Since completion of his World War II service which brought him the rank of colonel, Mr. Snow served as assistant general freight agent of the New York Central at Boston, which position he held at the time of his recent appointment as general eastern freight agent at New York.

Louis M. Dunn, general freight agent of the Elgin, Joliet & Eastern at Chicago, has been appointed assistant traffic manager, with the same headquarters, a newly-created position. **R. J. Hurst,** assistant general freight agent, succeeds Mr. Dunn as general freight agent, with headquarters as before at Chicago.

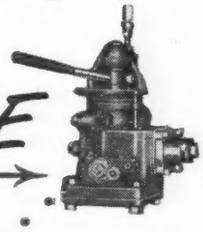
C. J. Petty, chief clerk in the district passenger office of the Illinois Central at Chicago, has been promoted to traveling passenger agent, with the same headquarters.

E. L. Tomlinson, district passenger agent of the Central of New Jersey at Newark, N. J., has been appointed general passenger agent of the Jersey Central

News Department continued on next left-hand page.

The Train may be still on the Drawing Board

but the Brakes for it are HERE



There are many new trains in the planning stage, and a lot of searching for new appeals and advantages that will add to safety and luxury, and win and hold passenger patronage.

One essential with years of planning behind it—the *"HSC" Electro-pneumatic Brake*—provides a solid base on which passenger appeal can be built. It is completely modern, provides the instant, positive response that safeguards passenger comfort and safety, and has proved its superior qualities in years of service on the nation's most famous trains.

If you have any new passenger trains in mind, equip them with this modern combination:

HSC Air Brakes . . . for braking flexibility to match modern train speeds, and unequalled smooth action. Speed Governor Control . . . for regulating brake forces to wheel speeds. *AP Decelostat* . . . for wheel slip detection to keep the wheels rolling.

Westinghouse Air Brake Co.

WILMERDING, PA.

lines, effective September 1, to succeed **Benjamin D. Branch,** who will retire on that date, after 47 years of railroad service, 40 of which have been with the C. N. J. **Watler W. Robinson,** district passenger agent at New York, will be transferred to Newark, to succeed Mr. Tomlinson. **James J. Hitchell,** traveling passenger agent at Newark, has been named district passenger agent at New York, to succeed Mr. Robinson.

H. W. Klein, whose appointment as freight traffic manager, rates and divisions, of the Southern Pacific, at San Francisco, Cal., was reported in *Railway Age* of

H. W. Klein

August 23, was born at Lathrop, Cal., on September 4, 1889, and entered railroad service with the St. Louis-San Francisco at St. Louis, Mo. In 1910 he entered the service of the Southern Pacific as a clerk in the tariff department at San Francisco. He became chief clerk in the general freight office in 1917; foreign freight agent in 1920; assistant general freight agent in 1921; and general freight agent, central district, in 1929. In 1934 Mr. Klein went to Portland, Ore., as general freight agent, northern district, and he became freight traffic manager, northern district, at that point, in 1942. On July 15, 1943, he was advanced to assistant vice-president, system freight traffic, at San Francisco, the position he held at the time of his recent appointment.

W. A. Beard, whose appointment as general western freight agent of the Southern, with headquarters at Chicago, was reported in *Railway Age* of July 12, was born in Ohio on April 19, 1903, and graduated by Ohio State University in 1926. He entered the service of the Southern in August, 1926, as a clerk in the traffic department at Washington, D. C. In October, 1929, he was promoted to freight traffic representative at Orlando, Fla., where he subsequently served as traveling freight and passenger agent and as district freight and passenger agent. In May, 1939, Mr. Beard was promoted to general eastern freight agent at New York. He was appointed general agent at Cleveland, Ohio, in February, 1940, and in January, 1945, he was transferred to Pittsburgh, Pa., where he served until his recent promotion.

Leonard C. Goering, whose promotion to coal traffic manager of the Louisville & Nashville, with headquarters at Louisville, Ky., was reported in *Railway Age* of

Leonard C. Goering

August 9, was born on December 14, 1899, at Hawesville, Ky., and began his railroad career with the L. & N. in 1917 as an office boy. He subsequently advanced to head bill clerk, and in 1921 was appointed claim investigator in the auditor overcharge claim department. In 1925 he was transferred to the traffic department, holding various positions in the general freight office and commerce branch. He became chief clerk, coal traffic department, in 1939 which position he held until his new appointment.

Hiram T. Askew, whose appointment as general passenger agent of the Chesapeake & Ohio, with headquarters at Richmond, Va., was announced in *Railway Age* of August 2, was born 40 years ago in Charleston, S. C. Mr. Askew entered C. & O. service as a stenographer at Rich-

Hiram T. Askew

mond in September, 1925, and since has held various secretarial and clerical positions at Richmond and Washington, D. C., before becoming assistant to general passenger agent in November, 1946. He served in that capacity until April of this year when he was appointed assistant general passenger agent, a post he filled until his recent advancement.

MECHANICAL

Orlin H. Clark, whose promotion to superintendent of the car department, Missouri Pacific, with headquarters at St. Louis, Mo., was reported in *Railway Age* of August 9, was born on July 22, 1897, at Borden, Ind., and entered railroad service in 1914 with the Louisville & Nashville as a carman helper at Louisville, Ky. He subsequently held various positions with that road, and in 1924 he joined the Missouri Pacific as assistant general car inspector at St. Louis. In 1926 Mr. Clark went to Houston, Tex., as supervisor of

Orlin H. Clark

car repair bills, and was promoted to general car inspector there in 1939. He returned to St. Louis in 1942 as assistant superintendent of car department, which position he held at the time of his recent promotion.

ENGINEERING & SIGNALING

Lawrence Spalding, whose appointment as principal assistant engineer of the Bessemer & Lake Erie at Greenville, Pa., was announced in *Railway Age* of August 9, was born on July 25, 1890, at Yonkers, N. Y. Mr. Spalding was graduated from

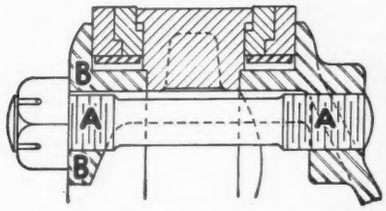
Lawrence Spalding

Cornell University, College of Civil Engineering, in 1913, and entered railroad service in June of that year as draftsman of the Pittsburg, Shawmut & Northern, serving in this capacity until February,

News Department continued on next left-hand page.

You're looking at 5 REASONS

Why HUNT-SPILLER Light Weight Valves are better



Cross section of valve packing and bull rings showing butt-welded stud bolt (A) and follower ring (B)

HUNT-SPILLER makes the only light weight steel piston valves offering the advantage of simple and easy application or renewal of packing rings. This exclusive feature means real savings in the shop because of the time you save when you don't have to disassemble the valve spool or remove the stem. All you do is loosen the five nuts which you see in the picture—and those on the other end. This releases the followers which hold the packing and bull rings in place. The old snap or sectional rings come off quickly; new ones go on easily. Just re-tighten the nuts and the job is done.

Who uses Hunt-Spiller Light Weight Steel Valves? Many important roads, including New York Central, Great Northern, Akron, Canton & Youngstown, Union Pacific, Milwaukee, Boston & Maine, Soo, Lehigh and New England, Bessemer, Texas and Pacific, and Lehigh & Hudson. Ask the Hunt-Spiller man about them. Hunt-Spiller Mfg. Corporation, 383 Dorchester Ave., Boston 27, Mass. In Canada: Joseph Robb & Co., Ltd., 4050 Namur St., Montreal 16, P. Q. Export Agents, International Ry. Supply Co., 30 Church Street, New York 7, N. Y.

Hunt-Spiller are exclusive railroad sales representatives for Double Seal Piston Rings made for Diesel and other services. Double Seal rings are cast from Hunt-Spiller *Air Furnace* Gun Iron.

HUNT-SPILLER

LIGHT WEIGHT
STEEL PISTONS AND VALVES
DUPLEX SECTIONAL PACKING
AIR FURNACE GUN IRON

1914, when he went with the Bessemer & Lake Erie as a draftsman. He was appointed supervisor of structures in March, 1916, became assistant valuation engineer in November, 1919, and, in April, 1924, was promoted to valuation engineer, at which post he remained until his recent advancement. Mr. Spalding had also been serving the Union as valuation engineer since 1924. He resigned from the service of that road upon taking over his new duties with the B. & L. E.

Howard Glenn Adams, whose appointment as assistant chief engineer of the Virginian at Norfolk, Va., was announced in *Railway Age* of August 9, was born at Ashtabula, Ohio, on November 2, 1886.

Aufinger Studios

Howard Glenn Adams

Mr. Adams received his degree in civil engineering from Purdue University in 1908 and entered the servce of the Virginian in that year. With the road continuously since that time, except for a short period during 1918-1919 when he was employed by the New York Central. Mr. Adams held varied engineering posts. He was appointed valuation engineer in 1943, the position he held at the time of his recent promotion.

Albert M. Traugott, whose retirement as chief engineer of the Virginian at Nor-

Albert M. Traugott

folk, Va., was reported in *Railway Age* of August 9, was born at Rochester, N. Y., on July 31, 1882, received his higher education at Purdue University, and entered railway service in 1898 as chainman with the Buffalo, Rochester & Pittsburgh (now part of the Baltimore & Ohio) later serving in the same capacity on the Delaware, Lackawanna & Western. In 1903 he went with the Deepwater Railway (now Virginian) as rodman and a year later became a draftsman on the same road. In 1908 he began his career with the Virginian as resident engineer, subsequently serving as locating engineer, 1913-1914, and as division engineer from 1914-1918. He was appointed acting chief engineer in 1919, becoming assistant chief engineer in 1920. In 1927 Mr. Traugott was advanced to chief engineer, the position he held at the time of his retirement.

M. Block, whose promotion to engineer of bridges of the Illinois Central, with headquarters at Chicago, was reported in *Railway Age* of August 9, was born on July 17, 1891, at Omaha, Neb., and received an engineering degree from the University of Colorado in 1912. He joined the I. C. in the latter year as masonry inspector, Northern and Southern lines, and was serving as assistant engineer at

M. Block

the time of World War I. Following military duty with the 47th Engineers during 1918 and 1919, Mr. Block returned to the I. C. as assistant engineer, valuation department. He held a similar position in the railroad's bridge department from 1922 to 1934, at which time he became chief draftsman in that department. In 1941 he was advanced to assistant to engineer of bridges, which position he held at the time of his recent promotion.

E. N. Philips, assistant valuation engineer of the Union, has been promoted to valuation engineer, with headquarters as before at Pittsburgh, Pa., succeeding **Lawrence Spalding,** who resigned to accept an appointment as principal assistant engineer of the Bessemer & Lake Erie.

R. A. Sharood, whose appointment as chief engineer of the Alaska, with headquarters at Anchorage, Alaska, was reported in *Railway Age* of August 16, was born at St. Paul, Minn., on February 25, 1904, and was graduated by Cornell University with the degree of civil engineer. He entered railroad service in 1927 as a chainman on the Northern Pacific, and served in various capacities in the engineering department of that road until 1931, when he was appointed branch line roadmaster, in which capacity he served in various territories in Montana, North Dakota, and Washington. In 1934 he was promoted to main line roadmaster on the Idaho division, and in August, 1941, he was transferred to the Rocky Mountain division. Mr. Sharood entered military service in March, 1942, and was released in January, 1946. He returned to the Northern Pacific, and was appointed assistant engineer of track, at St. Paul, the position he held at the time of his new appointment.

T. C. Kauffman has been appointed assistant division engineer of the New York Central, with headquarters at Toledo, Ohio.

OBITUARY

Roy R. Hill, general agent of the Texas & Pacific, with headquarters at Cincinnati, Ohio, died recently.

E. H. Piper, assistant to the vice-president of the Chicago, Burlington & Quincy, at Chicago, died on August 23, at San Gabriel, Cal.

G. O. Willhide, general master mechanic of the Western Maryland at Hagerstown, Md., died at his home in that city on August 25, following an illness of several months. Mr. Willhide was born at Chambersburg, Pa., on November 17, 1884, and entered the service of the Western Maryland as machinist on May 3, 1909, at Hagerstown. He subsequently held various supervisory positions in the maintenance of equipment department of that company, advancing to general master mechanic on March 1, 1944.

George Watson Kittredge, who retired in 1926 as chief engineer of the New York Central at New York, died on August 22 at his home in Yonkers, N. Y. Mr. Kittredge was born on December 11, 1856, at North Andover, Mass., and received his higher education at the Massachusetts Institute of Technology, from which he was graduated in 1877. He entered railroad service in 1880 with the Pittsburgh, Cincinnati & St. Louis (P.R.R.), subsequently becoming chief engineer of the Cleveland-Cincinnati, Chicago & St. Louis. Mr. Kittredge served as chief engineer of the New York Central from April, 1906, until December, 1926.

Paul Rising Peery, chief engineer of the Butte, Anaconda & Pacific at Anaconda, Mont., died at the Murray hospital in Butte, Mont., on August 16, following an illness of two weeks. Mr. Peery was born on October 12, 1892, and was graduated from the University of Colorado, where he studied civil engineering. He joined the engineering department of the Union Pacific in 1913, and remained with that road until April, 1938, when he became associated with the B. A. & P. He subsequently held positions successively as maintenance of way engineer and superintendent of maintenance of way and structures, and on January 1, 1945, was promoted to chief engineer, the position he held at the time of his death.